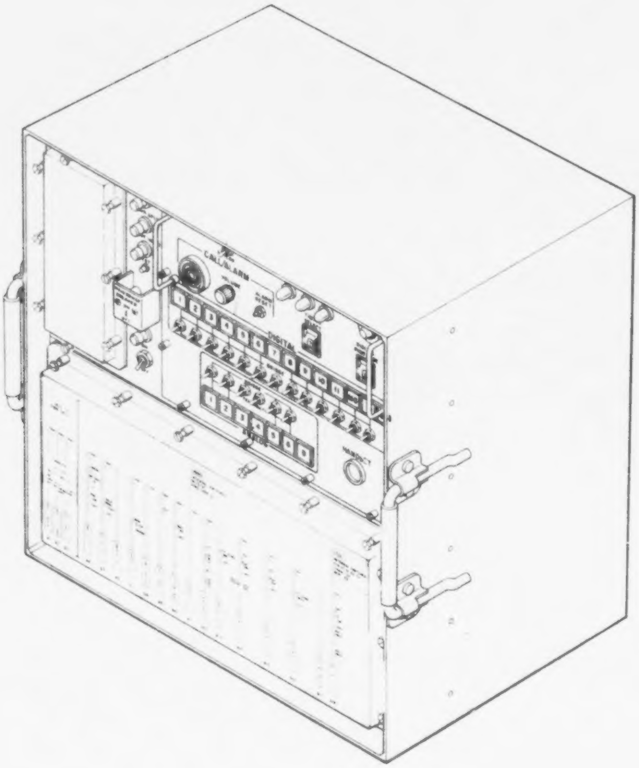
11-5805-726-12-2

ARMY TM 11-5805-726-12-2
NAVY EE163-EP-OMI-010/E154 C10717
AIR FORCE TO 31W2-2TRC-11-2

OPERATOR'S AND ORGANIZATIONAL MAINTENANCE MANUAL

EQUIPMENT DESCRIPTION Page 1-10
CONTROLS AND INDICATORS Page 2-2
OPERATOR PMCS Page 2-18
OPERATION Page 2-62
PREVENTIVE MAINTENANCE Page 4-6
TROUBLESHOOTING Page 4-12
ORGANIZATIONAL MAINTENANCE Page 4-21



ORDERWIRE CONTROL
C-10717/TRC
(NSN 5820-01-145-4901)

DEPARTMENTS OF THE ARMY, THE NAVY, AND
THE AIR FORCE

16 SEPTEMBER 1985

D 101.11:

READEX FICHE best copy available

⑤ SAFETY STEPS TO FOLLOW IF SOMEONE IS THE VICTIM OF ELECTRICAL SHOCK

① DO NOT TRY TO PULL OR GRAB THE INDIVIDUAL

② IF POSSIBLE, TURN OFF THE ELECTRICAL POWER

③ IF YOU CANNOT TURN OFF THE ELECTRICAL POWER, PULL, PUSH, OR LIFT THE PERSON TO SAFETY USING A WOODEN POLE OR A ROPE OR SOME OTHER INSULATING MATERIAL

④ SEND FOR HELP AS SOON AS POSSIBLE

⑤ AFTER THE INJURED PERSON IS FREE OF CONTACT WITH THE SOURCE OF ELECTRICAL SHOCK, MOVE THE PERSON A SHORT DISTANCE AWAY AND IMMEDIATELY START ARTIFICIAL RESUSCITATION

WARNING

HIGH VOLTAGE

The high voltage used in this equipment can kill on contact. Observe the following safety precautions:

• **Ground the Equipment**	Before connecting primary power or the signal cables, connect a heavy gage copper wire from the ground lug on the rear panel to earth ground. Do not remove this wire until the signal cables and primary power have been disconnected.
• **Avoid the Power Input**	Be careful not to contact the 115-volt ac input connections when installing or servicing the equipment.
• **Do Not Service Alone**	Never work on the equipment unless there is another person nearby who is familiar with the operation and hazards of the equipment and who can administer first aid.
• **Use One Hand**	Where possible, use only one hand to service the equipment. Keep the other hand away to reduce the hazard of current flowing through the vital organs of the body.

WARNING

CLEANING SOLVENT

The fumes of trichlorotrifluoroethane used for cleaning this equipment can cause severe irritation or injury. Observe the following safety precautions:

• **Ventilate**	Use only outside or in well ventilated areas and avoid breathing the fumes.
• **No Smoking**	Do not smoke while using and do not use near an open flame or hot surface. Trichlorotrifluoroethane does not burn but heat converts the fumes to a toxic, irritating gas.
• **Use Gloves**	Use gloves that trichlorotrifluoroethane can't penetrate. Because the solvent dissolves the natural oils, avoid long or repeated contact with your skin.
• **Wash**	Wash hands immediately after using.
• **Do Not Take Internally**	Do not drink. If taken internally, see a doctor immediately.

WARNING

HEAVY EQUIPMENT

This equipment weighs over 35 pounds and can cause serious injury if lifted or carried alone. Observe the following safety precaution:

• **Do Not Lift or Carry Alone**	Do not attempt to lift, carry, or move the equipment by yourself — get help.

INSERT LATEST CHANGED PAGES, DESTROY SUPERSEDED PAGES.

LIST OF EFFECTIVE PAGES

NOTE: The portion of the text affected by the changes is indicated by a vertical line in the outer margins of the page. Changes to illustrations are indicated by miniature pointing hands. Changes to wiring diagrams are indicated by shaded areas.

DATES OF ISSUE for original and changed pages are:

Original..0... 16 September 1985

TOTAL NUMBER OF PAGES in this publication is 208, consisting of the following:

Page No.	Change No.*
A-C	0
D Blank	0
i-iii	0
iv Blank	0
1-1 - 1-24	0
2-1 - 2-100	0
3-1	0
3-2 Blank	0
4-1 - 4-38	0
A-1 - A-2	0
B-1 - B-10	0
C-1 - C-2	0
E-1 - E-2	0
GLOSSARY-1 - GLOSSARY-2	0
INDEX-1 - INDEX-6	0
Forms (8)	0
FO-1 - FO-2	0

*Zero in this column indicates an original page.

TM 11-5805-726-12-2
EE163-EP-OMI-010/E154 C10717
TO 31W2-2TRC-11-2

Technical Manual
No. 11-5805-726-12-2
Technical Manual
EE163-EP-OMI-010/E154 C10717
Technical Order
No. 31W2-2TRC-11-2

DEPARTMENTS OF THE ARMY,
THE NAVY, AND
THE AIR FORCE

Washington, DC, 16 September 1985

OPERATOR'S AND ORGANIZATIONAL MAINTENANCE MANUAL
ORDERWIRE CONTROL C-10717/TRC
(NSN 5820-01-145-4901)

REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

You can help improve this manual. If you find any mistakes or if you know of a way to improve the procedures, please let us know. Mail your letter, DA Form 2028 (Recommended Changes to Publications and Blank Forms), or DA Form 2028-2 located in back of this manual direct to: Commander, US Army Communications-Electronics Command and Fort Monmouth, ATTN: AMSEL-ME-MP, Fort Monmouth, New Jersey 07703-5007.

For Air Force, submit AFTO Form 22 (Technical Order System Publication Improvement Report and Reply) in accordance with paragraph 6-5, Section VI, TO 00-5-1. Forward direct to prime ALC/MST.

For Navy, mail comments to the Commander, Naval Electronics System Command, ATTN: ELEX 8122, Washington, DC 20360.

In any case, a reply will be furnished direct to you.

		Page
	HOW TO USE THIS MANUAL	iii
CHAPTER 1	**INTRODUCTION**	
Section I	General Information	1-2
II	Equipment Description	1-10
III	Principles of Operation	1-20
CHAPTER 2	**OPERATING INSTRUCTIONS**	
Section I	Description and Use of Operators Controls and Indicators	2-2
II	Operator Preventive Maintenance Checks and Services	2-18
III	Operation Under Usual Conditions	2-62
IV	Operation Under Unusual Conditions	2-98

Page

CHAPTER 3 OPERATOR MAINTENANCE

CHAPTER 4 ORGANIZATIONAL MAINTENANCE

Section I Repair Parts; Special Tools; Test, Measurement, and Diagnostic Equipment (TMDE); and Support Equipment 4-2
II Service Upon Receipt 4-2
III Organizational Preventive Maintenance Checks and Services (PMCS) 4-6
IV Troubleshooting 4-12
V Maintenance Procedures 4-21

APPENDIX A REFERENCES A-1
B MAINTENANCE ALLOCATION CHART B-1
C COMPONENTS OF END ITEM AND BASIC ISSUE ITEMS LISTS C-1
D ADDITIONAL AUTHORIZATION LIST (Not Applicable)
E EXPENDABLE SUPPLIES AND MATERIALS LIST E-1

GLOSSARY GLOSSARY-1

ALPHABETICAL INDEX INDEX-1

LIST OF ILLUSTRATIONS

Fig. No.

FO-1 Orderwire Control C-10717/TRC Sample Application
FO-2 Orderwire Control C-10717/TRC External Connections Diagram

HOW TO USE THIS MANUAL

This manual tells you how to operate and maintain Orderwire Control C-10717/TRC.

Step-by-step procedures with illustrations give you all the necessary information to install, operate, and maintain this equipment at an organizational level. However, do not attempt any procedure before you first familiarize yourself with the entire procedure.

If you are looking for general information, use the table of contents in the front of this book to locate chapters and sections containing this information.

If you are looking for specific information, use the subject index in front of each chapter to locate the paragraph and page where the topic is discussed.

CHAPTER 1
INTRODUCTION

Page

Section I General Information 1-2

1-1 Scope 1-2
1-2 Consolidated Index of Army Publications and Blank Forms 1-2
1-3 Maintenance Forms, Records, and Reports 1-3
1-4 Hand Receipt (HR) Manual 1-5
1-5 Reporting Equipment Improvement Recommendations (EIR) 1-5
1-6 Administrative Storage 1-6
1-7 Destruction of Army Electronics Materiel 1-6
1-8 Nomenclature Cross-Reference List 1-6
1-9 List of Abbreviations 1-7

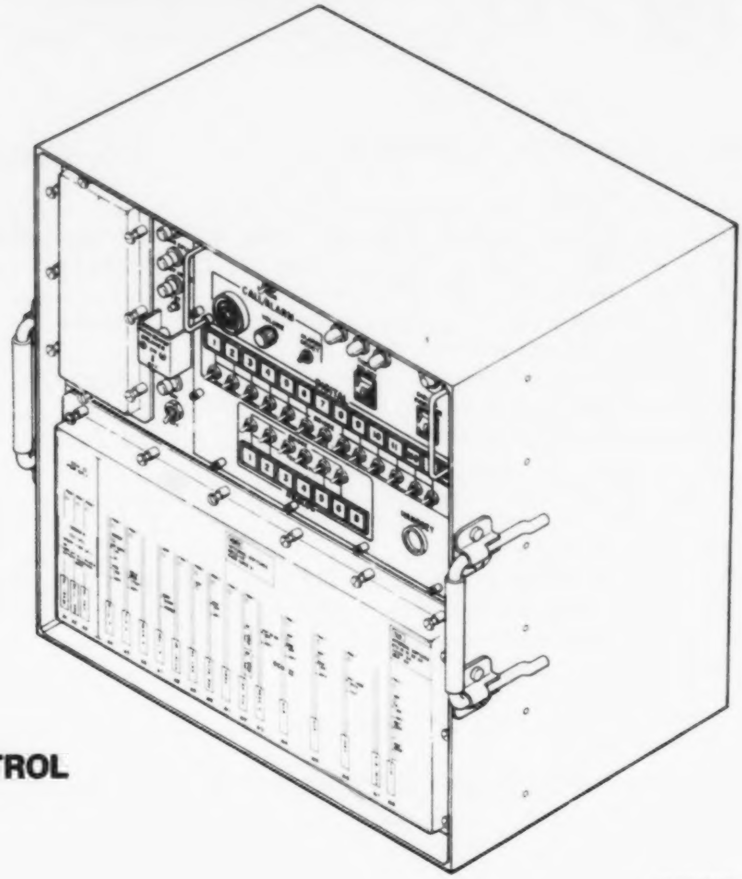
Section II Equipment Description 1-10

1-10 Purpose 1-10
1-11 Equipment Characteristics, Capabilities, Features, and Uses..... 1-11
1-12 Location and Description of Major Components 1-12
1-13 Applications 1-18
1-14 Performance Data 1-18

Section III Principles of Operation 1-20

1-15 OCU-II Functional Description.................................. 1-20

Section I. GENERAL INFORMATION



ORDERWIRE CONTROL
C-10717/TRC

EL9AS001

1-1. SCOPE

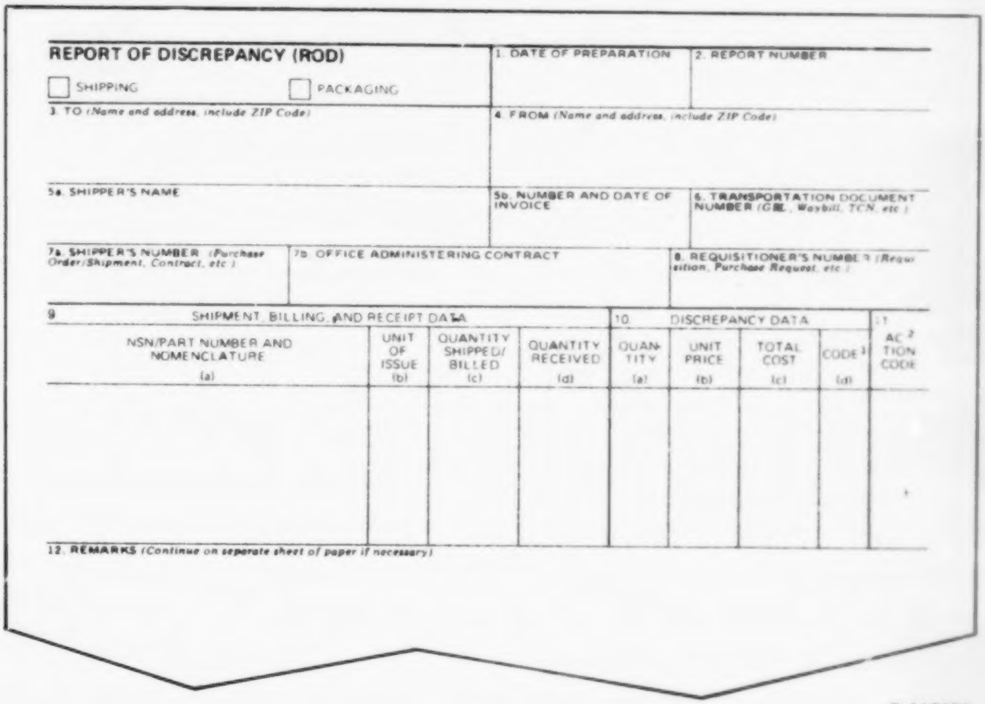
This manual provides general description, operation, and operator and/or organizational maintenance instructions for Orderwire Control C-10717/TRC. Orderwire Control C-10717/TRC is referred to in this manual as the OCU-II. (Orderwire Control Unit.)

1-2. CONSOLIDATED INDEX OF ARMY PUBLICATIONS AND BLANK FORMS

Refer to the latest issue of DA Pam 310-1 to determine whether there are new editions, changes, or additional publications pertaining to the equipment.

1-3. MAINTENANCE FORMS, RECORDS, AND REPORTS

a. Reports of Maintenance and Unsatisfactory Equipment. Department of the Army forms and procedures used for equipment maintenance will be those prescribed by DA Pam 738-750 as contained in Maintenance Management Update. Air Force personnel will use AFR 66-1 for maintenance reporting and TO-00-35D54 for unsatisfactory equipment reporting. Navy personnel will report maintenance performed using the Maintenance Data Collection Subsystem (MDCS) in accordance with OPNAVINST 4790.2, Volume 3, and unsatisfactory material conditions (UR submissions) in accordance with OPNAVINST 4790.2, Volume 2, Chapter 17.



REPORT OF DISCREPANCY (ROD)

☐ SHIPPING ☐ PACKAGING

1. DATE OF PREPARATION

2. REPORT NUMBER

3. TO *(Name and address, include ZIP Code)*

4. FROM *(Name and address, include ZIP Code)*

5a. SHIPPER'S NAME

5b. NUMBER AND DATE OF INVOICE

6. TRANSPORTATION DOCUMENT NUMBER *(GBL, Waybill, TCN, etc.)*

7a. SHIPPER'S NUMBER *(Purchase Order/Shipment, Contract, etc.)*

7b. OFFICE ADMINISTERING CONTRACT

8. REQUISITIONER'S NUMBER *(Requisition, Purchase Request, etc.)*

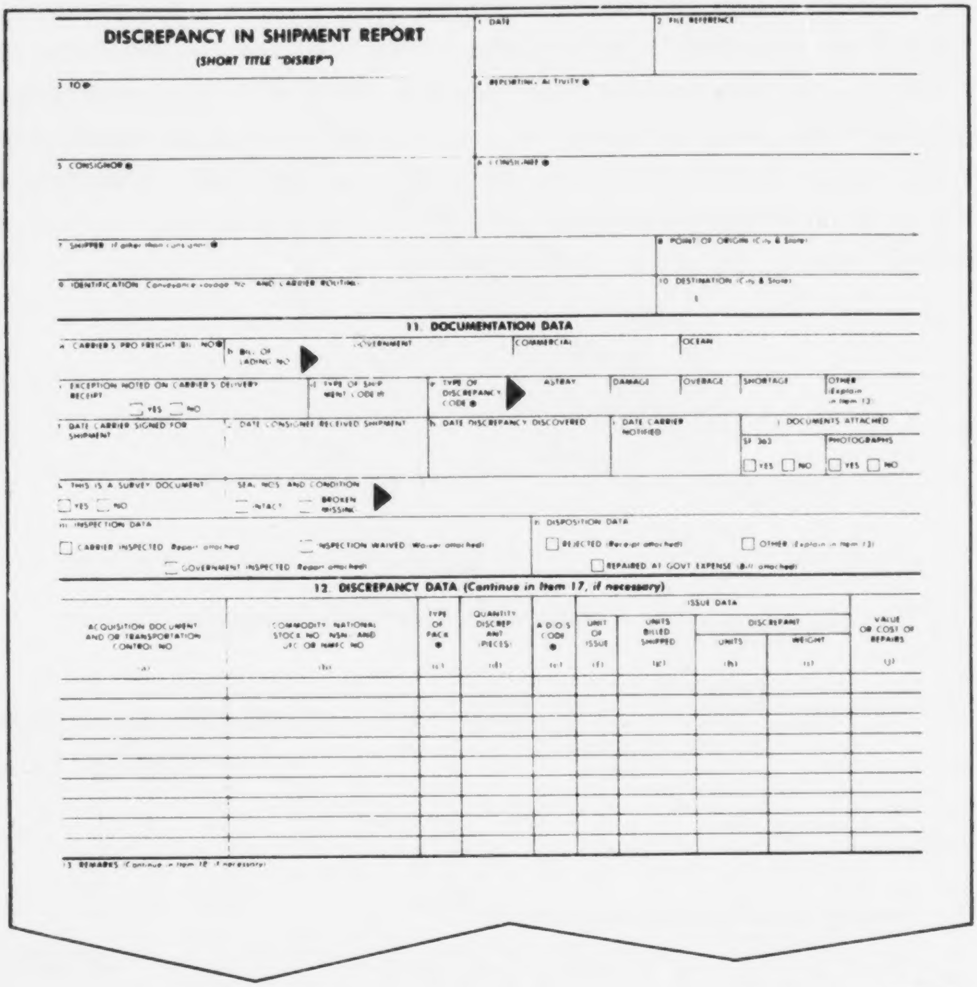
9 SHIPMENT, BILLING, AND RECEIPT DATA				10 DISCREPANCY DATA				11
NSN/PART NUMBER AND NOMENCLATURE (a)	UNIT OF ISSUE (b)	QUANTITY SHIPPED/ BILLED (c)	QUANTITY RECEIVED (d)	QUANTITY (a)	UNIT PRICE (b)	TOTAL COST (c)	CODE¹ (d)	ACTION CODE²

12. REMARKS *(Continue on separate sheet of paper if necessary)*

EL8AS002

b. Report of Packaging and Handling Deficiencies. Fill out and forward SF 364 (Report of Discrepancy (ROD)) as prescribed in AR 735-11-2/DLAR 4140.55/NAVMATINST 4355.73A/AFR 400-54/MCO 4430.3F.

1-3. MAINTENANCE FORMS, RECORDS, AND REPORTS—Continued



DISCREPANCY IN SHIPMENT REPORT
(SHORT TITLE "DISREP")

1. DATE	2. FILE REFERENCE
3. TO ●	4. REPORTING ACTIVITY ●
5. CONSIGNOR ●	6. CONSIGNEE ●
7. SHIPPER (If other than consignor) ●	8. POINT OF ORIGIN (City & State)
9. IDENTIFICATION (Conveyance/voyage No. AND CARRIER ROUTING)	10. DESTINATION (City & State)

11. DOCUMENTATION DATA

a. CARRIER'S PRO FREIGHT BILL NO.●	b. BILL OF LADING NO. ▶	GOVERNMENT	COMMERCIAL	OCEAN		
c. EXCEPTION NOTED ON CARRIER'S DELIVERY RECEIPT ☐ YES ☐ NO	d. TYPE OF SHIPMENT CODE ●	e. TYPE OF DISCREPANCY CODE ● ▶ ASTRAY	DAMAGE	OVERAGE	SHORTAGE	OTHER (Explain in Item 13)
f. DATE CARRIER SIGNED FOR SHIPMENT	g. DATE CONSIGNEE RECEIVED SHIPMENT	h. DATE DISCREPANCY DISCOVERED	i. DATE CARRIER NOTIFIED	j. DOCUMENTS ATTACHED	SF 363 ☐ YES ☐ NO	PHOTOGRAPHS ☐ YES ☐ NO
k. THIS IS A SURVEY DOCUMENT ☐ YES ☐ NO	l. SEAL NOS. AND CONDITION ☐ INTACT ☐ BROKEN/MISSING ▶					

m. INSPECTION DATA
☐ CARRIER INSPECTED (Report attached)
☐ INSPECTION WAIVED (Waiver attached)
☐ GOVERNMENT INSPECTED (Report attached)

n. DISPOSITION DATA
☐ REJECTED (Receipt attached)
☐ OTHER (Explain in Item 13)
☐ REPAIRED AT GOVT EXPENSE (Bill attached)

12. DISCREPANCY DATA (Continue in Item 17, if necessary)

ACQUISITION DOCUMENT AND/OR TRANSPORTATION CONTROL NO. (a)	COMMODITY NATIONAL STOCK NO. (NSN) AND UPC OR NMFC NO. (b)	TYPE OF PACK ● (c)	QUANTITY DISCREPANT (PIECES) (d)	A.D.O.S. CODE ● (e)	ISSUE DATA				VALUE OR COST OF REPAIRS (j)
					UNIT OF ISSUE (f)	UNITS BILLED/SHIPPED (g)	DISCREPANT		
							UNITS (h)	WEIGHT (i)	

13. REMARKS (Continue in Item 18, if necessary)

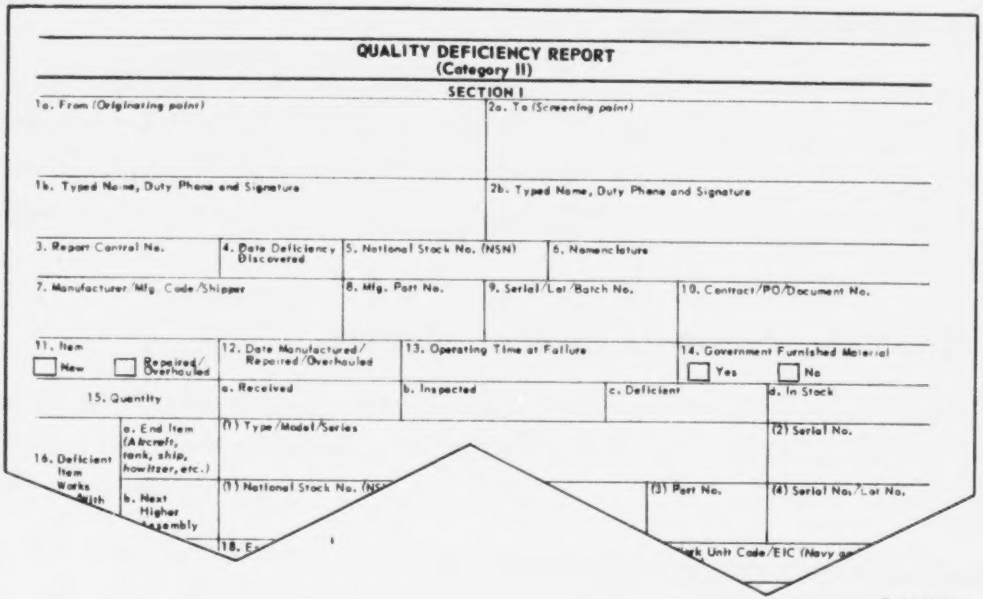
EL9AS003

c. Discrepancy in Shipment Report (DISREP) (SF 361). Fill out and forward Discrepancy in Shipment Report (DISREP) (SF 361) as prescribed in AR 55-38/NAVSUPINST 4610.33C/AFR 75-18/MCO P4610.19D/DLAR 4500.15.

1-4. HAND RECEIPT (HR) MANUAL

There is no Hand Receipt Manual required for this equipment.

1-5. REPORTING EQUIPMENT IMPROVEMENT RECOMMENDATIONS (EIR)



QUALITY DEFICIENCY REPORT
(Category II)

SECTION I

1a. From (Originating point)
2a. To (Screening point)
1b. Typed Name, Duty Phone and Signature
2b. Typed Name, Duty Phone and Signature
3. Report Control No.
4. Date Deficiency Discovered
5. National Stock No. (NSN)
6. Nomenclature
7. Manufacturer/Mfg. Code/Shipper
8. Mfg. Part No.
9. Serial/Lot/Batch No.
10. Contract/PO/Document No.
11. Item ☐ New ☐ Repaired/Overhauled
12. Date Manufactured/Repaired/Overhauled
13. Operating Time at Failure
14. Government Furnished Material ☐ Yes ☐ No
15. Quantity
a. Received
b. Inspected
c. Deficient
d. In Stock
16. Deficient Item Works With
a. End Item (Aircraft, tank, ship, howitzer, etc.)
(1) Type/Model/Series
(2) Serial No.
b. Next Higher Assembly
(1) National Stock No. (NS
(3) Part No.
(4) Serial No./Lot No.
18. E
ork Unit Code/EIC (Navy a

EL9AS004

a. Army. If your Orderwire Control C-10717/TRC needs improvement, let us know. Send us an EIR. You, the user, are the only one who can tell us what you don't like about your equipment. Let us know why you don't like the design. Put it on an SF 368 (Quality Deficiency Report). Mail it to Commander, US Army Communications-Electronics Command and Fort Monmouth, ATTN: AMSEL-ME-MP, Fort Monmouth, New Jersey 07703-5007. We'll send you a reply.

1-5. REPORTING EQUIPMENT IMPROVEMENT RECOMMENDATIONS (EIR)—Continued

b. Air Force. Air Force personnel are encouraged to submit EIRs in accordance with AFR 900-14.

c. Navy. Navy personnel are encouraged to submit EIRs through their local Beneficial Suggestion Program.

1-6. ADMINISTRATIVE STORAGE

Administrative storage of equipment issued to and used by Army activities will have preventive maintenance performed in accordance with the Preventive Maintenance Checks and Services (PMCS) charts before storing. When removing the equipment from administrative storage, the PMCS should be performed to assure operational readiness.

1-7. DESTRUCTION OF ARMY ELECTRONICS MATERIEL

Destruction of Army electronics materiel to prevent enemy use shall be in accordance with TM 750-244-2, Procedures for Destruction of Electronic Materiel to Prevent Enemy Use.

1-8. NOMENCLATURE CROSS-REFERENCE LIST

The following list will help you locate the official nomenclature of the major equipment associated with the OCU-II. Official nomenclature must be used when completing report forms or when using technical manuals.

Common Name	Official Nomenclature	Reference Designation
AC INPUT	Ac Input Circuit Card Assembly	A1
ALM INTC	Alarm Interface Circuit Card Assembly	A17
AMPL A	Analog Transmit Amplifier Circuit Card Assembly	A7
BITE 3	BITE 3 Circuit Card Assembly	A4
BRDG A	Analog Bridge Circuit Card Assembly	A6
BRDG D	Digital Bridge Circuit Card Assembly	A13
DCM	Data Channel Mux Circuit Card Assembly	A14, A15

1-8. NOMENCLATURE CROSS-REFERENCE LIST—Continued

Common Name	Official Nomenclature	Reference Designation
DVOW	Digital Voice Orderwire Mux Circuit Card Assembly	A10
GPFRG	Group Framing Circuit Card Assembly	A9
LDRG	Lamp Driver/Ring Generator Circuit Card Assembly	A16
MULTI VDC	Multi Vdc Circuit Card Assembly	A2
OWINTFC	Orderwire Interface Circuit Card Assembly	A8
SIG	Analog Signaling Circuit Card Assembly	A5
TCG	Telemetry Combiner/Generator Circuit Card Assembly	A18
TMG SCE	Timing Source Circuit Card Assembly	A12
VBRD	VINSON Buffer/Ring Detector Circuit Card Assembly	A11
52 VDC	52 Vdc Circuit Card Assembly	A3

1-9. LIST OF ABBREVIATIONS

Abbreviations are spelled out the first time they appear in text. However, a complete list of all abbreviations used in this manual is given below as an additional aid to knowing their full meaning. Acronyms also are included.

Abbreviation/Acronym	Definition
AVOW	Analog Voice Orderwire
BER	Bit Error Rate
BITE	Built-In Test Equipment
CCA	Circuit Card Assembly
DGM	Digital Group Multiplexer
DISREP	Discrepancy in Shipment Report
DLED	Dedicated Loop Encryption Device
DOW	Data Orderwire
DVOW	Digital Voice Orderwire

1-9. LIST OF ABBREVIATIONS—Continued

Abbreviation/Acronym	Definition
EIR	Equipment Improvement Recommendation
FSCM	Federal Supply Code for Manufacturers
GF	Group Frame
GM	Group Modem (Modem, Digital Data MD-1026(P)/G)
GND	Ground
GP	Group
HR	Hand Receipt
Hz	Hertz
HSCDM	High Speed Cable Driver Modem (Modem, Cable Driver MD-1024/G)
ID	Identification
kb/s	Thousand Bits per Second
LED	Light Emitting Diode
LGM	Loop Group Multiplexer (Multiplexer TD-1235(P)/TTC)
LM	Loop Modem
LOI	Loss of Input
LRU	Lowest Replaceable Unit
LSCDM	Low Speed Cable Driver Modem (Modem, Cable Driver MD-1023(P)/G)
MAC	Maintenance Allocation Chart
MDCS	Maintenance Data Collection Subsystem
MGM	Master Group Multiplexer (Multiplexer TD-1237(P)/G)

1-9. LIST OF ABBREVIATIONS—Continued

Abbreviation/Acronym	Definition
MTOE	Modified Table of Organization and Equipment
MUX	Multiplexer
MWO	Modification Work Orders
NRZ	Nonreturn to Zero
OOF	Out of Frame
PMCS	Preventive Maintenance Checks and Services
PRG	Pseudo Random Generator
PTT	Push-to-Talk
RLGM/CD	Remote Loop Group Modem/Cable Driver (Modem, Cable Driver MD-1025/G)
RM	Radio Modem (Modem, Digital Data MD-1065/G)
RPSTL	Repair Parts and Special Tools List
ROD	Report of Discrepancy
TC	Telemetry Combiner
TD	Telemetry Decombiner
TED	Trunk Encryption Device
TGM	Trunk Group Multiplexer (Multiplexer TD-1236/G)
TM	Technical Manual
TMDE	Test, Measurement, and Diagnostic Equipment
TMG	Timing
TO	Technical Order
VINSON	Voice Encryption Device TSEC/Ky-58

Section II. EQUIPMENT DESCRIPTION

1-10. PURPOSE

The OCU-II is a maintenance communications device used in multichannel communications systems. It has three primary functions: analog voice orderwire (AVOW), digital voice orderwire (DVOW), and data orderwire (DOW).

The AVOW function provides analog voice communications and the DVOW provides digital voice communications between the local shelter and remote shelters in the overall communications system. The DOW function monitors the communications equipment in the local shelter and transmits status information to the system control.

The OCU-II contains a timing source which supplies the timing for other DGM units, and can be used for shelter checkout, or as a system master.

Bridging capabilities of the OCU-II exist only if there are two or more subscribers.

1-11. EQUIPMENT CHARACTERISTICS, CAPABILITIES, FEATURES, AND USES

a. Characteristics.

- Shelter and rack mounted
- Powered from standard 115 V ac line
- Interfaces with other DGM and crypto equipments

b. Capabilities.

- Analog voice maintenance communication
- Digital voice maintenance communication
- Status monitoring

c. Features.

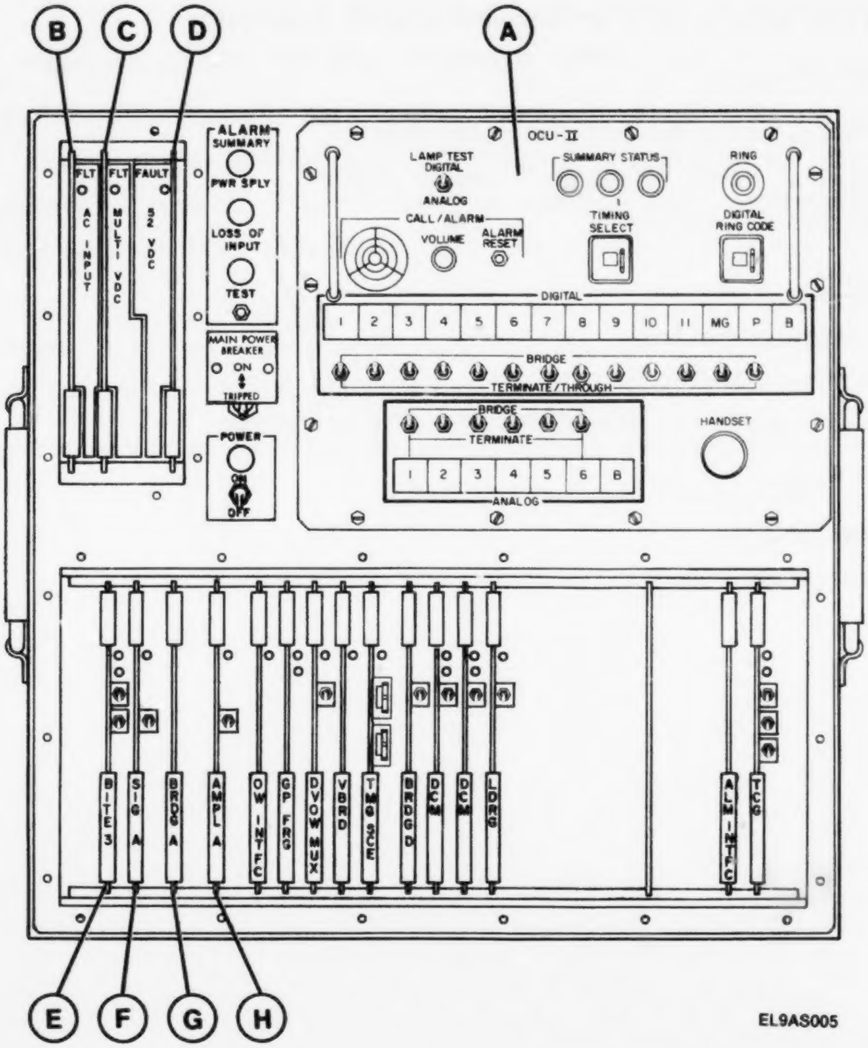
- Simple operation
- Built-in test equipment
- Rapid access to assemblies for ease of repair

d. Used With.

- AN/TRC-175
- AN/TRC-38 MOD

1-12. LOCATION AND DESCRIPTION OF MAJOR COMPONENTS

All major components of the OCU-II are located in one metal case which may be rack mounted.


B
C
D
A
FLT
FLT
FAULT
AC INPUT
MULTI VDC
52 VDC
ALARM
SUMMARY
PWR SPLY
LOSS OF INPUT
TEST
MAIN POWER BREAKER
ON
TRIPPED
POWER
ON
OFF
OCU-II
LAMP TEST
DIGITAL
ANALOG
SUMMARY STATUS
RING
CALL/ALARM
VOLUME
ALARM RESET
TIMING SELECT
DIGITAL RING CODE
DIGITAL
1 2 3 4 5 6 7 8 9 10 11 MG P B
BRIDGE
TERMINATE/THROUGH
BRIDGE
TERMINATE
1 2 3 4 5 6 B
ANALOG
HANDSET
BITE 3
SIG A
BRDG A
AMPL A
OW INTFC
GP FRG
DVOW MUX
VBRD
TMG SCE
BRDG D
DCM
DCM
LDRG
ALM INTFC
TCG
E
F
G
H
EL9AS005

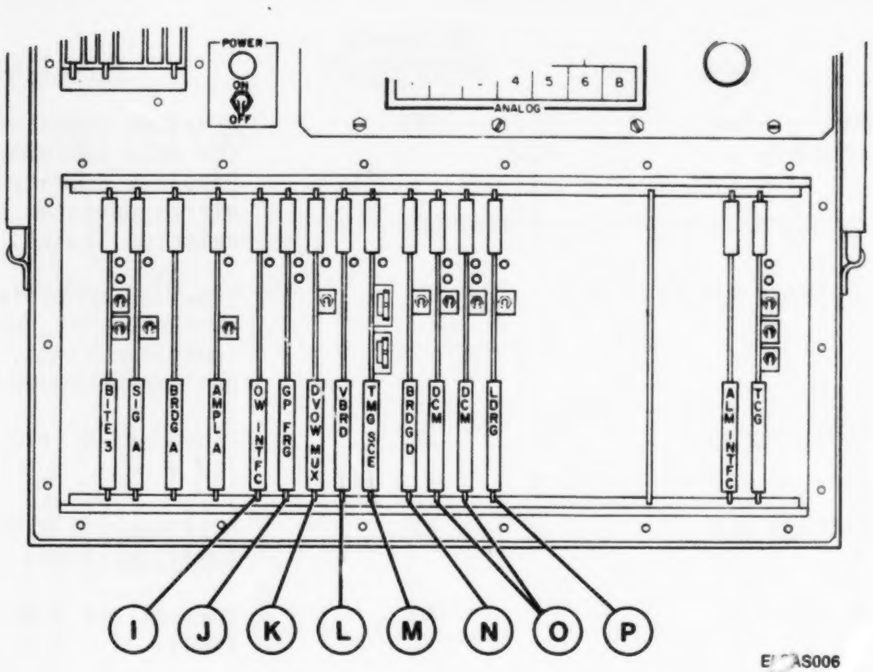
NOTE

Reference designators are shown on OCU-II cover.

1-12. LOCATION AND DESCRIPTION OF MAJOR COMPONENTS—Continued

Key	Name	Reference Designation	Function
Ⓐ	Control Panel Assembly	A19	Provides operator interface for AVOW and DVOW circuits. Displays summary status and alerts operator to BITE detected faults.
Ⓑ	AC INPUT CCA	A1	Provides rectified ac, sums system faults, drives indicator lamps, initiates nuclear shutdown.
Ⓒ	MULTI VDC CCA	A2	Provides -5, +12, and -12 V dc.
Ⓓ	+52 VDC CCA	A3	Provides +52 V dc for powering lamps.
Ⓔ	BITE 3 CCA	A4	Detects and indicates faults.
Ⓕ	SIG A CCA	A5	Monitors incoming AVOWs for ring tones. Generates 1600 Hz analog ring tone and sends ring tone to analog bridge CCA upon operator command.
Ⓖ	BRDG A CCA	A6	Bridges any combination of six AVOWs. Terminates any AVOW at the operator. Provides operator access to the bridge. Injects ring tone on bridge or selected orderwire. Amplifies operator handset signals.
Ⓗ	AMPL A CCA	A7	Converts six single-ended AVOW channel outputs to balanced 600 ohm line outputs. Provides CVSD for digital maintenance orderwire.

1-12. LOCATION AND DESCRIPTION OF MAJOR COMPONENTS—Continued


POWER
ON
OFF
4
5
6
8
ANALOG
BITE 3
SIG A
BRDG A
AMPL A
OW INTFC
GP FRG
DVOW MUX
VBRD
TMG SCE
BRDG D
DCM
DCM
LDRG
ALM INTFC
TCG
I
J
K
L
M
N
O
P

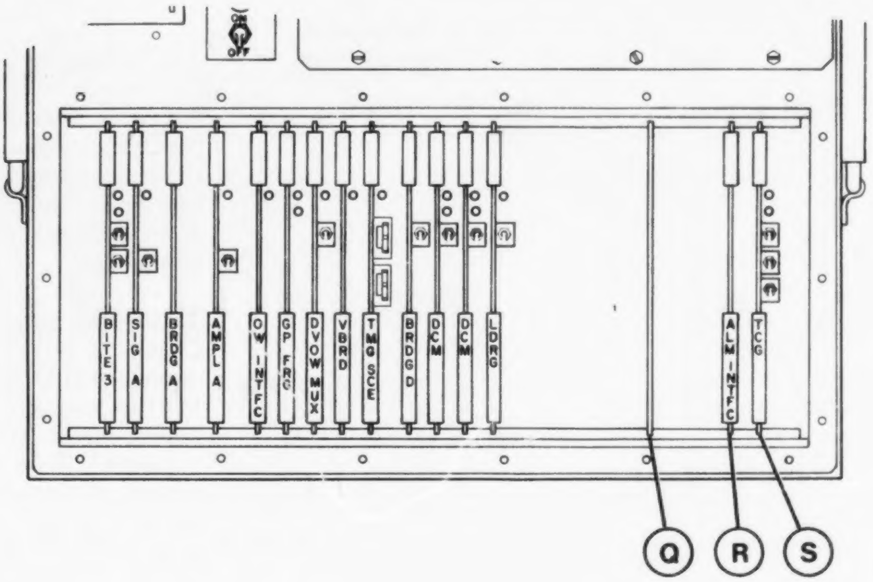
E AS006

Key	Name	Reference Designation	Function
Ⓘ	OW INTFC CCA	A8	Retimes the 12 digital voice orderwire channels to prevent bit ambiguity when multiplexed by DVOW Mux.
Ⓙ	GP FRG CCA	A9	Frames and synchronizes the group data for the DVOW mux CCA.
Ⓚ	DVOW MUX CCA	A10	Multiplexes 12 channels of 16 kb/s digital voice into a 256 kb/s group stream or demultiplexes a 256 kb/s group stream into 12 channels of 16 kb/s digital voice.

1-12. LOCATION AND DESCRIPTION OF MAJOR COMPONENTS—Continued

Key	Name	Reference Designation	Function
Ⓛ	VBRD CCA	A11	Buffers Vinson data to synchronize with local DVOW timing. Monitors DVOW channels for ring codes. Alerts operator to calling channel.
Ⓜ	TMG SCE CCA	A12	In master mode, an 18432 Hz clock is divided down to supply internal and external timing signals. In slave mode, locks to either an internal DVOW timing channel or an external group rate. Resets to master mode should slave mode fail.
Ⓝ	BRDG D CCA	A13	Bridges any combination of up to 13 DVOWs. Terminates any DVOW at the operator. Provides operator access to bridge. Configures DVOW for three different modes of operation. Converts outgoing DVOW to balanced outputs.
Ⓞ	DCM CCA	A14, A15	Multiplexes up to seven cable driver modem or group modem 2 kb/s data streams into a 16 kb/s data stream or demultiplexes a single 16 kb/s data stream into seven 2 kb/s data streams for application to a CDM or GM.
Ⓟ	LDRG CCA	A16	Generates DVOW ring codes. Provides lamp drive signals to DVOW lamps on control panel assembly.

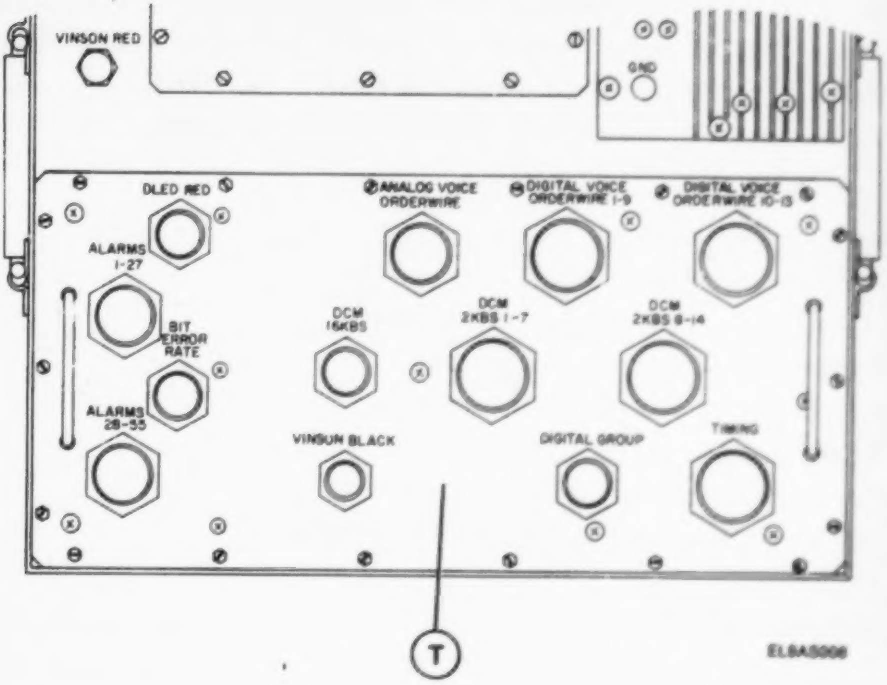
1-12. LOCATION AND DESCRIPTION OF MAJOR COMPONENTS—Continued


ON
OFF
BITE 3
SIG A
BRDG A
AMPL A
OW INTFC
GP FRG
DVOW MUX
VBRD
TMG SCE
BRDG D
DCM
DCM
LDRG
ALM INTFC
TCG
Q
R
S

EL9AS007

Ⓠ	Filter Assembly		Filters control lines.
Ⓡ	ALM INTFC CCA	A17	Multiplexes DOW status/alarm inputs into six 8-bit words for the TCG CCA.
Ⓢ	TCG CCA	A18	Frames, identifies, and separates incoming DOW channel into 13 DOW subchannels. Combines 13 DOW channels (including local station) into a single data stream.

1-12. LOCATION AND DESCRIPTION OF MAJOR COMPONENTS—Continued


VINSON RED
GND
DLED RED
ANALOG VOICE ORDERWIRE
DIGITAL VOICE ORDERWIRE 1-9
DIGITAL VOICE ORDERWIRE 10-13
ALARMS 1-27
BIT ERROR RATE
ALARMS 28-55
DCM 16KBS
DCM 2KBS 1-7
DCM 2KBS 8-14
VINSUN BLACK
DIGITAL GROUP
TIMING
T
ELBA5008

Key	Name	Reference Designation	Function
Ⓣ	Connector Panel Assembly	A20A2	Interfaces OCU-II with other shelter equipment.

1-13. APPLICATIONS

The OCU-II is designed to operate with tactical communications transmission assemblages. It provides the equipment assemblage operator with access to and supervision of analog voice orderwires (AVOWs), digital voice orderwires (DVOWs), and in addition supports a data orderwire (DOW). The OCU-II may interface with, but is not necessarily limited to, the following equipment:

a. Cable Driver Modem MD-1023(P)/G (LSCDM)
b. Cable Driver Modem MD-1024/G (HSCDM)
c. Cable Driver Modem MD-1025/G (RLGM/CD)
d. Digital Data Modem MD-1026(P)/G (GM)
e. Digital Data Modem MD-1065/G (RM)
f. Multiplexer TD-1236/G (TGM)
g. TED Encryption Device (TED)
h. Alarm Status Indicator (ASI)
i. Voice Encryption Device TSEC/Ky-58 (VINSON)

1-14. PERFORMANCE DATA

a. Analog Voice Orderwire.

- Capacity - Six analog voice orderwires
- Bridging - Any combination of channels
- Interface - Type - Balanced 600 ohm, full duplex
- Frequency response - Bandwidth - ±0.5 dB, 300 to 3400 Hz, (referenced to 1 kHz)
- Signaling - Frequency - 1600 Hz ± 32 Hz
  Signaling - Level - -4 dBm ± 1 dB (output)
  -16 dBm to -2 dB (input)

b. Digital Voice Orderwire.

- Capacity - 13 digital voice orderwires
- Bridging - Any combination of channels
- Interface - Type - balanced full duplex
  - VINSON 16 kb/s, unbalanced half duplex
- Signaling - 16 codes for selective ringing

1-14. PERFORMANCE DATA—Continued

c. Data Orderwire.

- Capacity - Number of channels - 1 in, 1 out
  Number of subchannels - 13 per channel
- Interface - Type - DLED, 2 kb/s, balanced
  - Alarm - relay closure at 20 V dc, 100 mA max
    - logic driver
  - BER, 4 binary coded decimal lines, 3 strobe lines to radio
- Station ID - Code - 3 character alphanumeric digital code

d. Prime Power.

- Ac Input - 115 ± 11.5 V ac, 47 to 420 Hz single phase, 80 W maximum

e. Environmental Characteristics.

(1) Temperature

- Operating - -32° C (-25° F) to +71° C (+160° F)
- Storage - -57° C (-70° F) to +63° C (+145° F)

(2) Humidity

- Operating and Storage - Tropical levels

(3) Altitude

- Operating - 15,000 feet maximum
- Air Transportation - 40,000 feet maximum

f. Physical Characteristics.

(1) Dimensions

- Height - 17.47 inches
- Depth - 12 inches
- Width - 17.25 inches (less brackets)

(2) Weight - 54 pounds

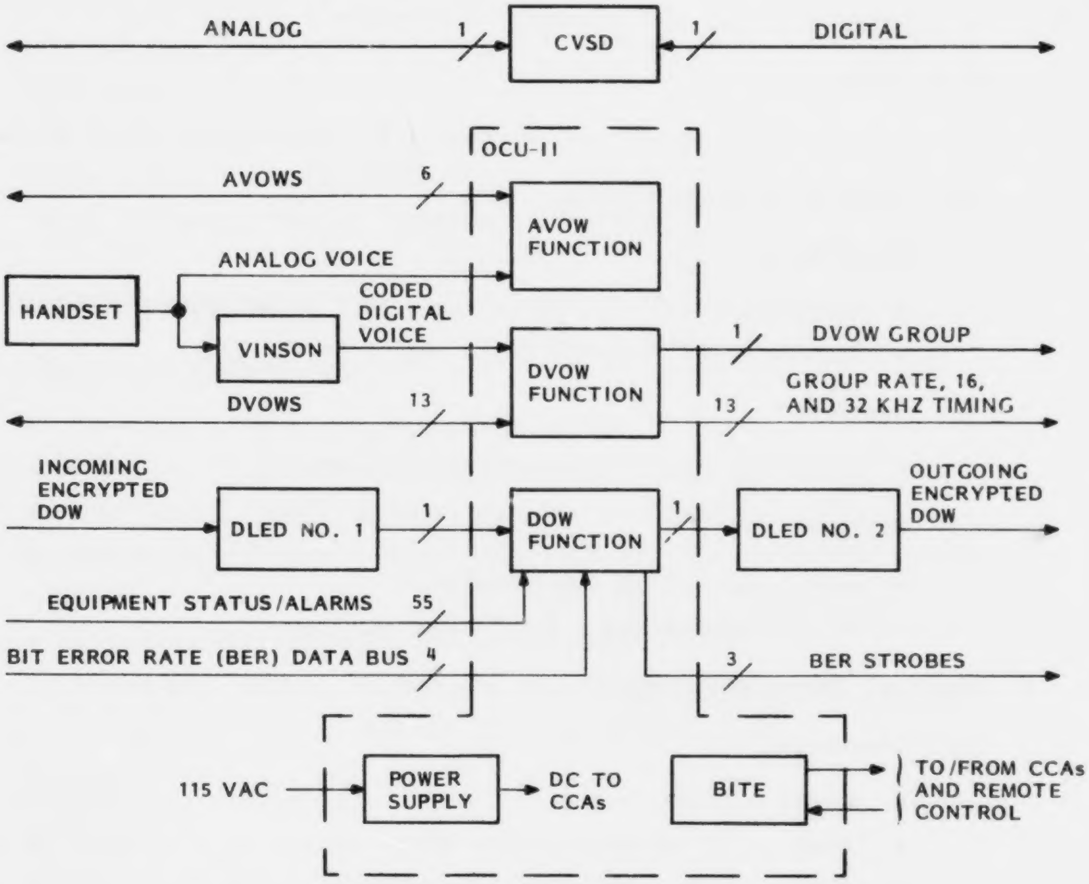
(3) Type of Mounting - 19-inch rack

Section III. PRINCIPLES OF OPERATION

1-15. OCU-II FUNCTIONAL DESCRIPTION

The OCU-II provides three orderwire functions:

- Analog Voice Orderwire (AVOW)
- Digital Voice Orderwire (DVOW)
- Data Orderwire (DOW)


ANALOG
1
CVSD
1
DIGITAL
OCU-II
AVOWS
6
AVOW FUNCTION
ANALOG VOICE
HANDSET
CODED DIGITAL VOICE
VINSON
DVOW FUNCTION
1
DVOW GROUP
DVOWS
13
13
GROUP RATE, 16, AND 32 KHZ TIMING
INCOMING ENCRYPTED DOW
DLED NO. 1
1
DOW FUNCTION
1
DLED NO. 2
OUTGOING ENCRYPTED DOW
EQUIPMENT STATUS/ALARMS
55
BIT ERROR RATE (BER) DATA BUS
4
3
BER STROBES
115 VAC
POWER SUPPLY
DC TO CCAs
BITE
TO/FROM CCAs AND REMOTE CONTROL

EL9AS009

1-15. OCU-II FUNCTIONAL DESCRIPTION—Continued

It also provides the following:

- Built-In Test Equipment (BITE)
- Operating Voltages (Power Supply)

a. Analog Voice Orderwire. The AVOW controls up to six analog voice orderwires. Using controls on the control unit, the operator can select any of the six channels either privately or in any combination for multiparty conversations. The AVOW can also function as a maintenance orderwire (MOW). The MOW is used to convert the AVOW to digital form for fiber optics modems. The AVOW is a full duplex function, but requires the push-to-talk on the handset.

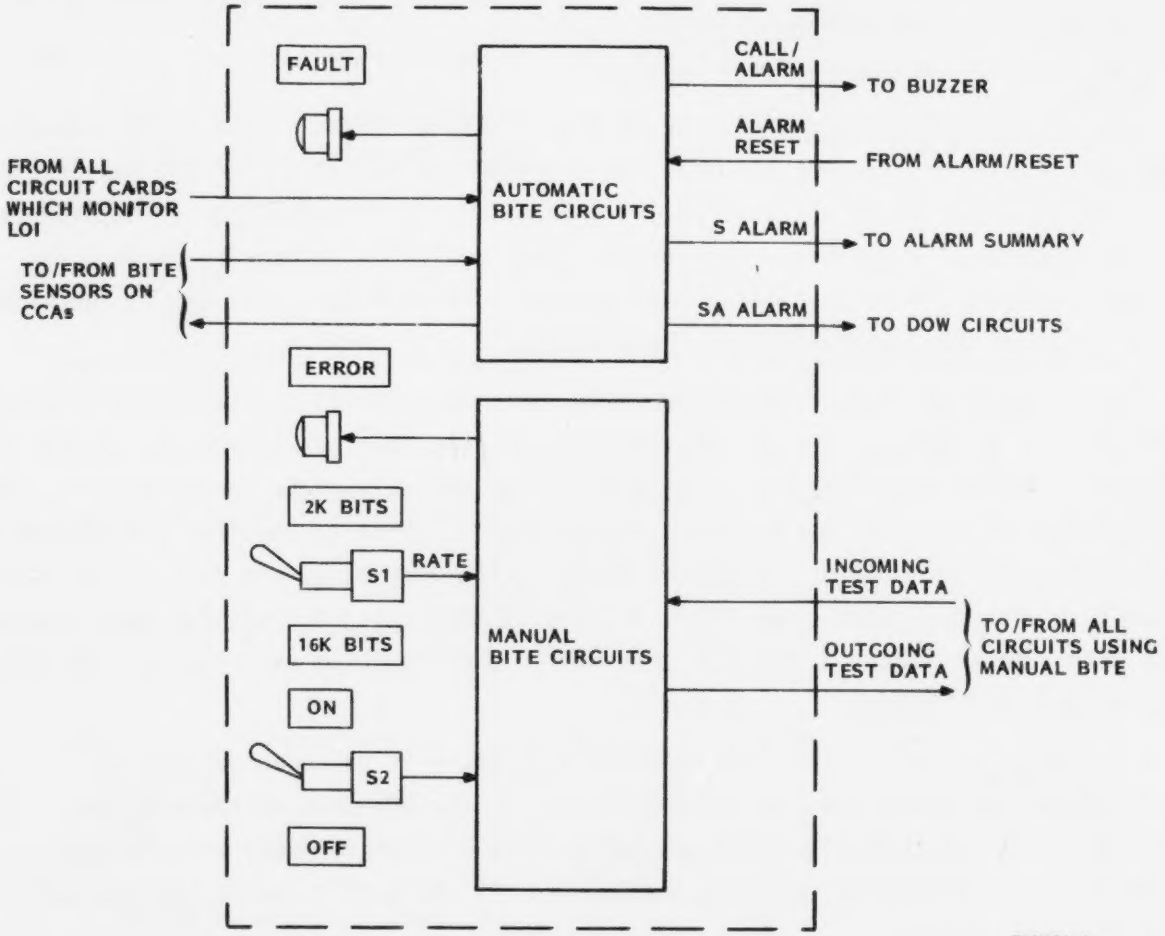
b. Digital Voice Orderwire. The DVOW controls up to 13 digital voice orderwires. Using controls on the control unit, the operator can select any of the 13 channels either privately or in any combination for multiparty conversations. All DVOW data is coded for secure voice communication. Data to and from the handset is processed through a voice encryption device (VINSON) that is not part of the OCU-II. The DVOW also generates group rate, 16, and 32 kHz timing signals for distribution to other DGM equipment. The DVOW is a half duplex function and requires the push-to-talk on the handset.

c. Data Orderwire. The DOW receives data after it has been decoded by dedicated loop encryption device (DLED) No. 1. The DOW then multiplexes the incoming data with local shelter alarms and bit error rate (BER) information. The multiplexed data is then sent to DLED No. 2, where it is encrypted and sent to the next shelter.

The DOW also monitors BERs from three radios. If the BERs exceed the threshold, the amber SUMMARY STATUS lamp on the remote control panel is lit.

The DOW also monitors shelter status and alarms. If a fault is detected, the red SUMMARY STATUS lamp lights and the CALL/ALARM sounds. The DCM function multiplexes up to 14 DOW channels into two DOW groups.

1-15. OCU-II FUNCTIONAL DESCRIPTION—Continued

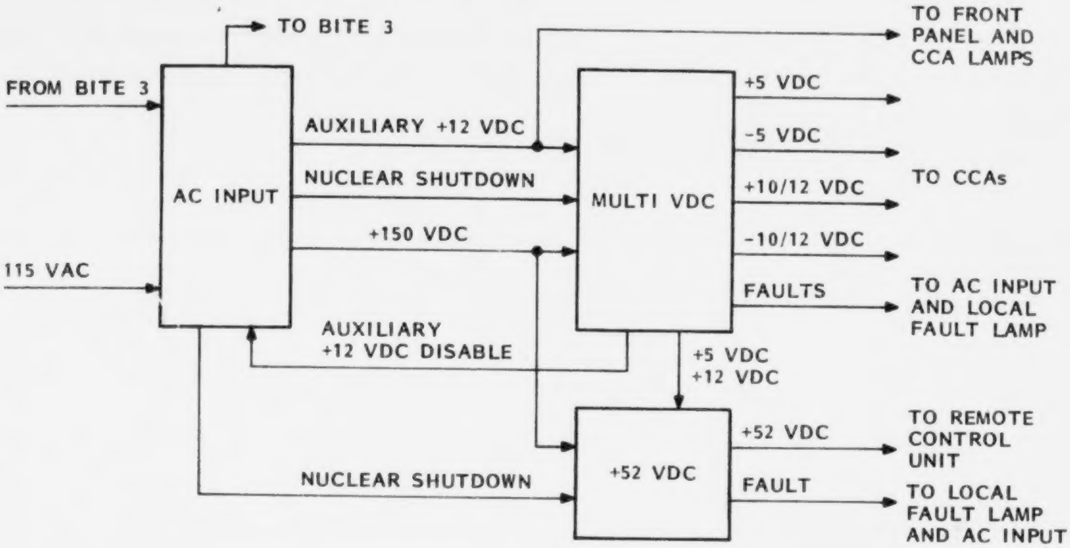

FAULT
CALL/ ALARM
TO BUZZER
ALARM RESET
FROM ALARM/RESET
FROM ALL CIRCUIT CARDS WHICH MONITOR LOI
AUTOMATIC BITE CIRCUITS
S ALARM
TO ALARM SUMMARY
TO/FROM BITE SENSORS ON CCAs
SA ALARM
TO DOW CIRCUITS
ERROR
2K BITS
S1
RATE
INCOMING TEST DATA
16K BITS
MANUAL BITE CIRCUITS
TO/FROM ALL CIRCUITS USING MANUAL BITE
OUTGOING TEST DATA
ON
S2
OFF

EL9AS010

d. BITE. The BITE consists of both automatic circuits and manual circuits. The automatic BITE tests all circuits which are active at all times. It monitors all CCAs with BITE sensors and reports faults to the DOW circuits. Manual BITE is a stream of either 2K or 16K pseudorandom data bits. Those bits go to DOW or DVOW circuits that must be manually tested.

When faults are detected, the CALL/ALARM sounds and the red SUMMARY STATUS lamp lights.

1-15. OCU-II FUNCTIONAL DESCRIPTION—Continued


TO BITE 3
FROM BITE 3
115 VAC
AC INPUT
AUXILIARY +12 VDC
NUCLEAR SHUTDOWN
+150 VDC
AUXILIARY
+12 VDC DISABLE
NUCLEAR SHUTDOWN
MULTI VDC
+52 VDC
+5 VDC
-5 VDC
+10/12 VDC
-10/12 VDC
FAULTS
+5 VDC
+12 VDC
+52 VDC
FAULT
TO FRONT PANEL AND CCA LAMPS
TO CCAs
TO AC INPUT AND LOCAL FAULT LAMP
TO REMOTE CONTROL UNIT
TO LOCAL FAULT LAMP AND AC INPUT

EL9AS011

e. Power Supply. The OCU-II is powered by 115 V ac. The ac input converts the 115 V ac into +150 V dc and auxiliary +12 V dc. The auxiliary +12 V dc is used to power the front panel lamps and CCA fault lamps until the multi Vdc is fully operational. When the multi Vdc is working, the auxiliary +12 V dc disable signal is sent to the ac input. This switches out the auxiliary +12 V dc. The +12 V dc disable signal then powers the fault lamps. The +150 V dc is used to power the multi Vdc and the +52 Vdc circuits. The ac input also detects nuclear radiation. If nuclear radiation is detected, a shutdown command is sent to the multi Vdc and +52 Vdc CCAs.

The multi Vdc converts +150 V dc to:

- +5 V dc
- -5 V dc
- +10/+12 V dc
- -10/-12 V dc

These voltages are sent to all CCAs. A fault within the multi Vdc CCA is reported to ac input CCA and lights an internal fault LED. The multi Vdc also sends +12 and +5 V dc to the +52 Vdc for use as reference voltages.

1-15. OCU-II FUNCTIONAL DESCRIPTION—Continued

The +52 Vdc CCA converts +150 V dc using the reference voltage to produce a regulated +52 V dc. The +52 V dc is used by the control panel to power all lamps. Faults within the +52 Vdc CCA are reported to the ac input CCA and light internal fault LEDs.

CHAPTER 2
OPERATING INSTRUCTIONS

Page

Section I Description and Use of Operator Controls and Indicators 2-2

2-1 Front Panel Controls and Indicators 2-2
2-2 Rear Panel Connectors 2-8
2-3 Circuit Card Assembly Controls and Indicators 2-10

Section II Operator Preventive Maintenance Checks and Services 2-18

2-4 General 2-18
2-5 Operator PMCS Table 2-18

Section III Operation Under Usual Conditions 2-62

2-6 Resetting CCA Switches 2-62
2-7 Equipment Turnon 2-71
2-8 Operator Checks 2-73
2-9 AVOW Operation 2-80
2-10 DVOW Operation 2-88
2-11 Equipment Turnoff 2-97

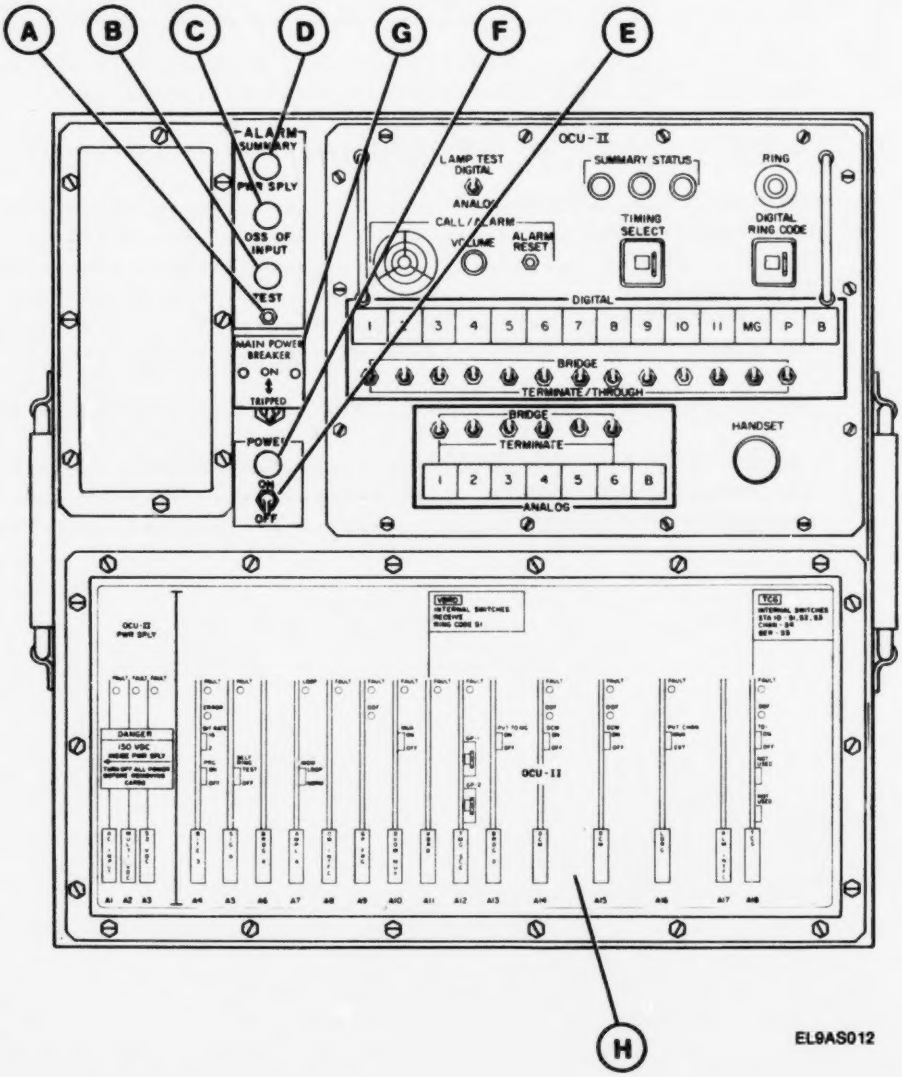
Section IV Operation Under Unusual Conditions 2-98

2-12 Operating in Unusual Weather 2-98
2-13 Electrical Interference 2-99
2-14 Emergency Procedures 2-99

Section I. DESCRIPTION AND USE OF OPERATOR CONTROLS AND INDICATORS

2-1. FRONT PANEL CONTROLS AND INDICATORS

All OCU-II operator controls and indicators are located on the front panel. All other controls and indicators are located on the CCAs, and are for maintenance and setup.

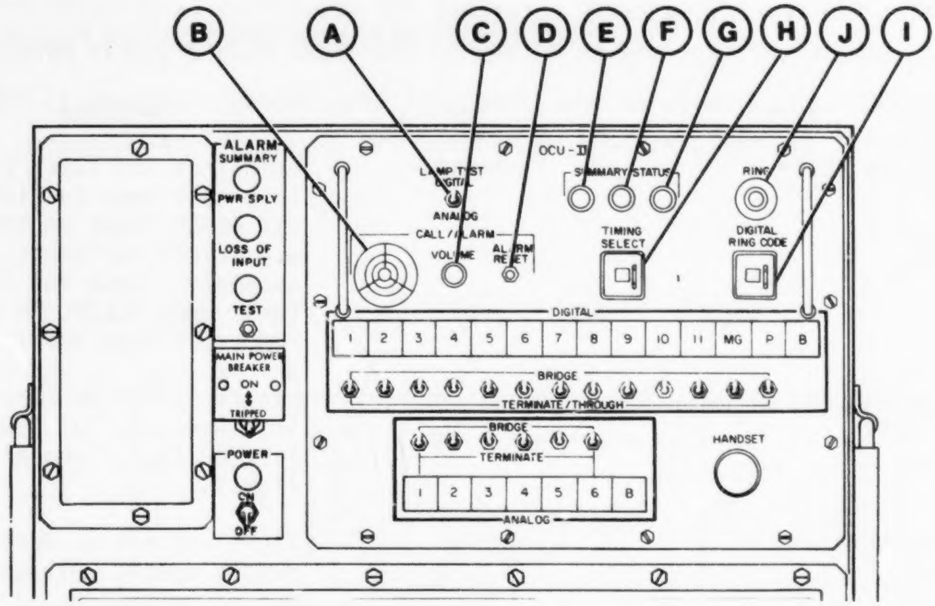

A
B
C
D
G
F
E
ALARM
SUMMARY
PWR SPLY
LOSS OF INPUT
TEST
MAIN POWER BREAKER
ON
TRIPPED
POWER
ON
OFF
OCU-II
LAMP TEST
DIGITAL
ANALOG
SUMMARY STATUS
RING
CALL/ALARM
VOLUME
ALARM RESET
TIMING SELECT
DIGITAL RING CODE
DIGITAL
1
2
3
4
5
6
7
8
9
10
11
MG
P
B
BRIDGE
TERMINATE/THROUGH
BRIDGE
TERMINATE
1
2
3
4
5
6
B
ANALOG
HANDSET
OCU-II PWR SPLY
DANGER
150 VDC
OCU-II
A1
A2
A3
A4
A5
A6
A7
A8
A9
A10
A11
A12
A13
A14
A15
A16
A17
A18
H
EL9AS012

2-1. FRONT PANEL CONTROLS AND INDICATORS—Continued

A label on the front panel shows the locations of all CCAs and CCA-mounted controls and indicators. The label is a handy reference for use during maintenance and system setup. Switch settings may be marked on the label with a grease pencil.

Key	Name	Type	Function
Ⓐ	ALARM TEST	Pushbutton	Energizes the BITE circuits in a test mode to light all ALARM lamps on the electrical equipment case assembly. Same for STATUS lamps and CALL/ALARM on remote control panel.
Ⓑ	ALARM LOSS OF INPUT	Lamp	Lights if one or more CCA loses an external input. The CCA fault lamp also lights.
Ⓒ	ALARM PWR SPLY	Lamp	Lights if one or more power supply output voltage is out of tolerance.
Ⓓ	ALARM SUMMARY	Lamp	Lights if a fault is detected in the electrical equipment case assembly.
Ⓔ	POWER ON/OFF	Toggle Switch	Switches 115 Vac to power supply ON or OFF.
Ⓕ	POWER	Lamp	Lights when power to power supply circuits are on.
Ⓖ	MAIN POWER BREAKER	Circuit Breaker	Trips when an overload exists in the electrical equipment case assembly. Can be reset by throwing circuit breaker to ON position.
Ⓗ	Label	Label	Identifies internal controls and indicators.

2-1. FRONT PANEL CONTROLS AND INDICATORS—Continued


B
A
C
D
E
F
G
H
J
I
ALARM
SUMMARY
PWR SPLY
LOSS OF INPUT
TEST
MAIN POWER BREAKER
ON
TRIPPED
POWER
ON
OFF
OCU-II
LAMP TEST
DIGITAL
ANALOG
CALL/ALARM
VOLUME
ALARM RESET
SUMMARY STATUS
TIMING SELECT
RING
DIGITAL RING CODE
DIGITAL
1
2
3
4
5
6
7
8
9
10
11
MG
P
B
BRIDGE
TERMINATE/THROUGH
BRIDGE
TERMINATE
1
2
3
4
5
6
B
ANALOG
HANDSET

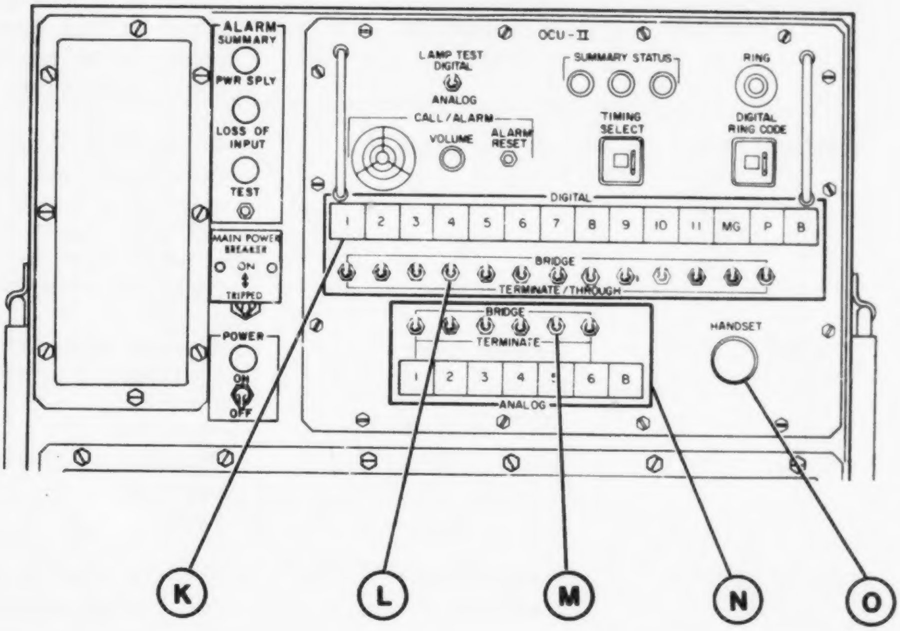
EL9AS013

Key	Name	Type	Function
Ⓐ	LAMP TEST	Toggle Switch	When held in the DIGITAL position, lights the DIGITAL switch/indicators and sounds the CALL/ALARM. When held in the ANALOG/STATUS position, lights the ANALOG switch/indicators, and sounds the CALL/ALARM.
Ⓑ	CALL/ALARM	Audible Tone Alarm	Sounds audible tone when a remote party rings in, when an equipment failure occurs, or when LAMP TEST or ALARM TEST switch is pressed.
Ⓒ	VOLUME	Variable Resistor	Controls volume and frequency of CALL/ALARM tone.

2-1. FRONT PANEL CONTROLS AND INDICATORS—Continued

Key	Name	Type	Function
Ⓓ	ALARM RESET	Momentary Pushbutton Switch	Silences CALL/ALARM tone after it has been activated by an equipment fault condition.
Ⓔ	SUMMARY STATUS	Green Lamp	ON when monitored shelter equipments are operating without a detected fault. OFF when fault is detected or when high bit error rate (BER) is detected.
Ⓕ	SUMMARY STATUS	Amber Lamp	ON when high BER and no equipment faults are detected.
Ⓖ	SUMMARY STATUS	Red Lamp	ON when monitored shelter equipments have a detected fault.
Ⓗ	TIMING SELECT	Thumbwheel Switch	Selects timing reference for timing source CCA. Positions 1-5 and MG select a DVOW channel. Position "M" selects the master clock on the timing source CCA. Position "G" selects the received DVOW group timing.
Ⓘ	DIGITAL RING CODE	Thumbwheel Switch	One-segment, 16-position switch that selects one of 16 digital ring codes for DVOW.
Ⓙ	RING	Momentary Pushbutton Switch	Initiates the selected ring signal (digital or analog) for the type of orderwire (DVOW or AVOW) connected to the operator.

2-1. FRONT PANEL CONTROLS AND INDICATORS—Continued


ALARM
SUMMARY
PWR SPLY
LOSS OF INPUT
TEST
MAIN POWER BREAKER
ON
TRIPPED
POWER
ON
OFF
OCU-II
LAMP TEST
DIGITAL
ANALOG
CALL/ALARM
VOLUME
ALARM RESET
SUMMARY STATUS
TIMING SELECT
RING
DIGITAL RING CODE
DIGITAL
1 2 3 4 5 6 7 8 9 10 11 MG P B
BRIDGE
TERMINATE/THROUGH
BRIDGE
TERMINATE
1 2 3 4 5 6 B
ANALOG
HANDSET
K
L
M
N
O

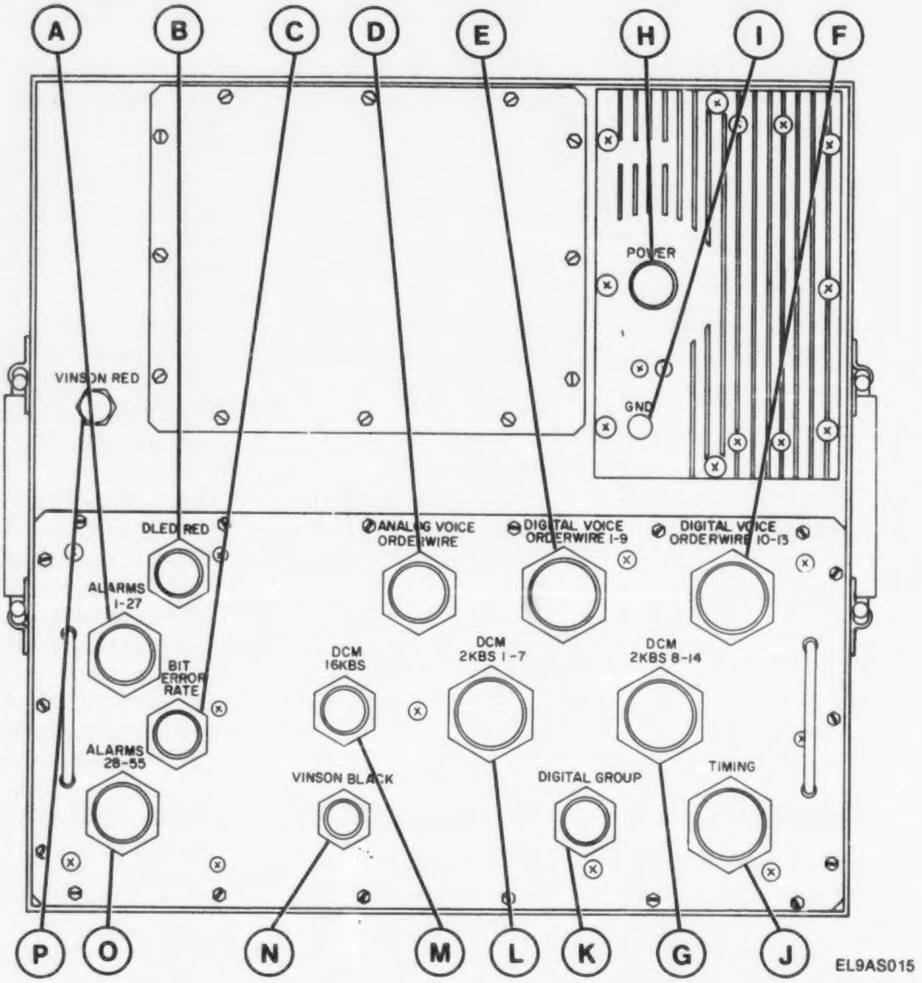
EL9AS014

Key	Name	Type	Function
Ⓚ	DIGITAL 1-11, MG, P, and B	Alternate Action, Magnetically Latched Switch/Indicators	Pushbutton switch/indicators 1-11, MG, and P connect the OCU-II to the corresponding DVOW channels. Pushbutton switch/indicator B puts the local operator on the bridge.

2-1. FRONT PANEL CONTROLS AND INDICATORS—Continued

Key	Name	Type	Function
Ⓛ	DIGITAL BRIDGE/ TERMINATE - THROUGH	Toggle Switch	The BRIDGE position connects the respective switch orderwire to the OCU-II digital bridge. The TERMINATE/ THROUGH position connects channels to their normal path either (THROUGH) the OCU-II or (TERMINATE).
Ⓜ	ANALOG BRIDGE/ TERMINATE	Six 2-Position Toggle Switches	BRIDGE position connects associated channel to OCU-II analog bridge. TERMINATE stops the channel at the OCU-II.
Ⓝ	ANALOG 1-6 and B	Alternate Action, Magnetically Latched Switch/Indicators	The 1-6 switch/indicators connect AVOW channel with OCU-II operator. The B switch/indicator connects operator with analog bridge. 1-6 switch/indicators flash when a call is received on an associated AVOW. Switch/ indicators come on continuously when selected.
Ⓞ	HANDSET	Multipin Male Jack	Connects operator's handset to OCU-II.

2-2. REAR PANEL CONNECTORS

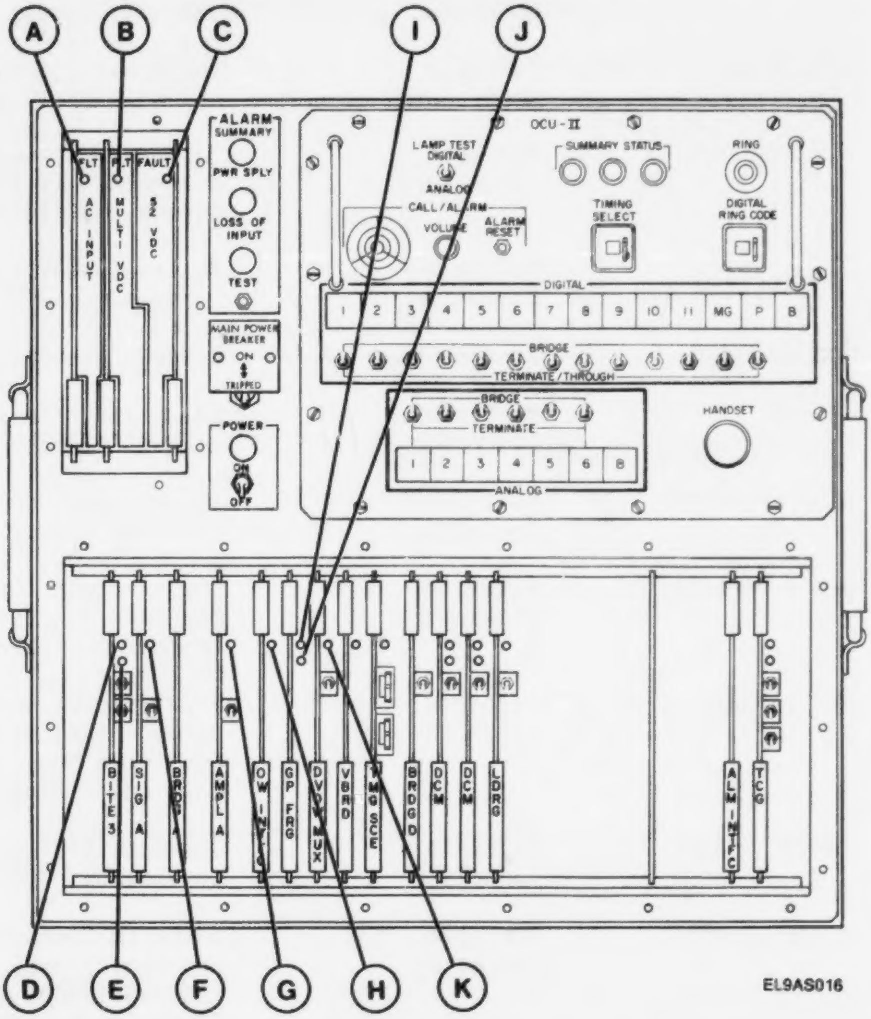

A
B
C
D
E
H
I
F
POWER
VINSON RED
GND
DLED RED
ANALOG VOICE ORDERWIRE
DIGITAL VOICE ORDERWIRE 1-9
DIGITAL VOICE ORDERWIRE 10-13
ALARMS 1-27
BIT ERROR RATE
DCM 16KBS
DCM 2KBS 1-7
DCM 2KBS 8-14
ALARMS 28-55
VINSON BLACK
DIGITAL GROUP
TIMING
P
O
N
M
L
K
G
J
EL9AS015

Key	Name	Type	Function
Ⓐ	ALARMS 1-27	Multipin Connector	Connects contact-closure alarm inputs from equipment located in local shelter.
Ⓑ	DLED RED	Multipin Connector	Connects outgoing and incoming decrypted data orderwire signals.
Ⓒ	BIT ERROR RATE	Multipin Connector	Connects bit error rate codes and strobes to and from shelter radio.
Ⓓ	ANALOG VOICE ORDERWIRE	Multipin Connector	Connects six full-duplex AVOW channels.

2-2. REAR PANEL CONNECTORS—Continued

Key	Name	Type	Function
Ⓔ	DVOW 1-9	Multipin Connector	Input/output connector for channels 1-9 of the DVOW.
Ⓕ	DVOW 10-13	Multipin Connector	Input/output connector for channels 10-13 of the DVOW.
Ⓖ	DCM 2 kb/s 8-14	Multipin Connector	Input/output connector for channels 8-14 for the data channel multiplexer No. 1.
Ⓗ	POWER	Multipin Connector	Ac line power connector.
Ⓘ	GROUND (GND)	Binding Post	Ground connector.
Ⓙ	TIMING	Multipin Connector	Sends and receives timing signals from/to OCU-II.
Ⓚ	DIGITAL GROUP	Multipin Connector	Input/output connector for the DVOW group.
Ⓛ	DCM 2 kb/s 1-7	Multipin Connector	Input/output connector for channels 1-7 for the data channel multiplexer No. 2.
Ⓜ	DCM 16 kb/s	Multipin Connector	Input/output connector for data channel multiplexers No. 1 and No. 2 combined data and timing.
Ⓝ	VINSON BLACK	Multipin Connector	Connects DSVT orderwire to external VINSON.
Ⓞ	ALARMS 28-55	Multipin Connector	Connects contact-closure and logic-level alarms from equipment located in local shelter.
Ⓟ	VINSON RED	Multipin Connector	Connects handset to VINSON for encoding and decoding of DVOW.

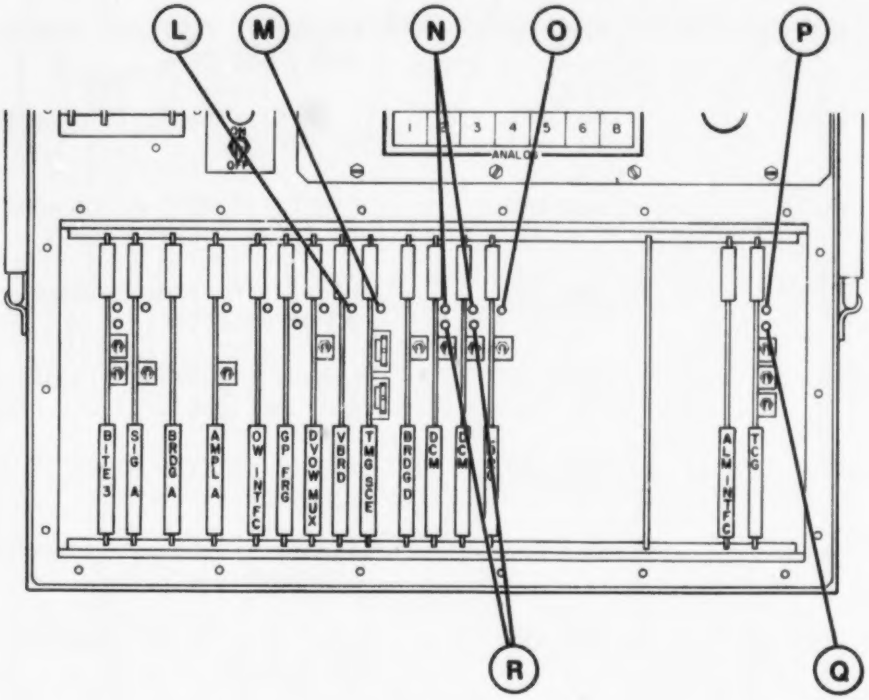
2-3. CIRCUIT CARD ASSEMBLY CONTROLS AND INDICATORS


A
B
C
I
J
FLT
AC INPUT
FLT
MULTI VDC
FAULT
52 VDC
ALARM
SUMMARY
PWR SPLY
LOSS OF INPUT
TEST
MAIN POWER BREAKER
ON
TRIPPED
POWER
ON
OFF
OCU-II
LAMP TEST
DIGITAL
ANALOG
SUMMARY STATUS
RING
CALL/ALARM
VOLUME
ALARM RESET
TIMING SELECT
DIGITAL RING CODE
DIGITAL
1
2
3
4
5
6
7
8
9
10
11
MG
P
B
BRIDGE
TERMINATE/THROUGH
BRIDGE
TERMINATE
1
2
3
4
5
6
8
ANALOG
HANDSET
BITE 3
SIG A
BRDG A
AMPL A
OW INTFC
GP FRG
DVOW MUX
VBRD
TMG SCE
BRDG D
DCM
DCM
LDRG
ALM INTFC
TCG
D
E
F
G
H
K
EL9AS016

2-3. CIRCUIT CARD ASSEMBLY CONTROLS AND INDICATORS—Continued

Key	Name	Type	Function
Ⓐ	FLT	Red LED	Lights if fault is detected on ac input CCA.
Ⓑ	FLT	Red LED	Lights if fault is detected on multi Vdc CCA.
Ⓒ	FAULT	Red LED	Lights if fault is detected on 52 Vdc CCA.
Ⓓ	Fault	Red LED	Lights if BITE 3 CCA malfunctions or lacks proper input.
Ⓔ	Error	Red LED	Lights if error is detected by error detector.
Ⓕ	Fault	Red LED	Lights if analog signaling CCA malfunctions or lacks proper input.
Ⓖ	Loop	Red LED	Lights if CVSD coder is in loop mode.
Ⓗ	Fault	Red LED	Lights if orderwire interface CCA malfunctions.
Ⓘ	Fault	Red LED	Lights if group frame CCA malfunctions.
Ⓙ	Out of Frame (OOF)	Red LED	Lights if input signal to group frame CCA is out of frame.
Ⓚ	Fault	Red LED	Lights if DVOW multiplexer CCA malfunctions or lacks proper inputs.

2-3. CIRCUIT CARD ASSEMBLY CONTROLS AND INDICATORS—Continued

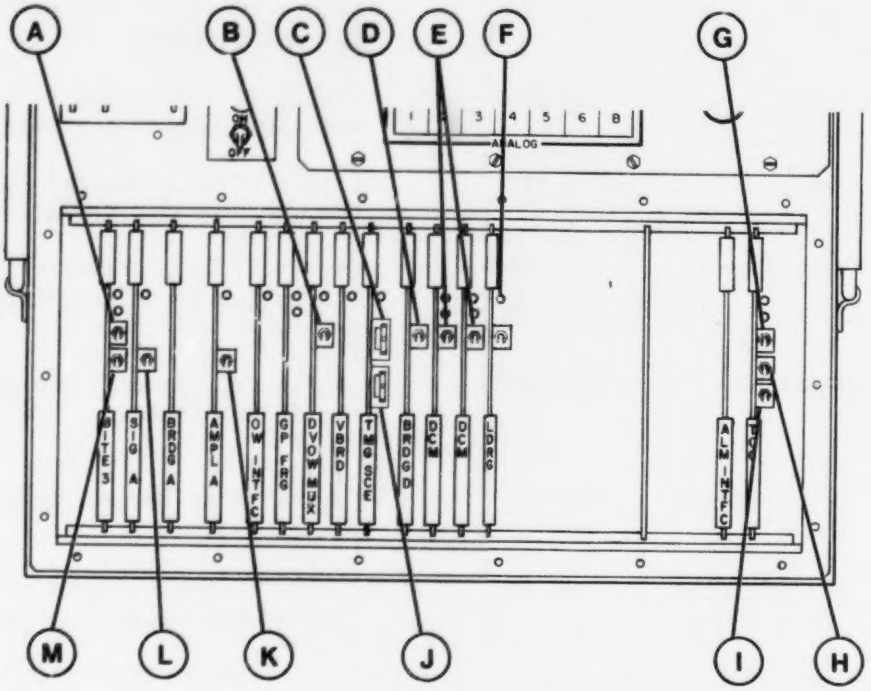

L
M
N
O
P
ON
OFF
1
2
3
4
5
6
8
ANALOG
BITE 3
SIG A
BRDG A
AMPL A
OW INTFC
GP FRG
DVOW MUX
VBRD
TMG SCE
BRDG D
DCM
DCM
ALM INTFC
TCG
R
Q

EL8AS017

2-3. CIRCUIT CARD ASSEMBLY CONTROLS AND INDICATORS—Continued

Key	Name	Type	Function
Ⓛ	Fault	Red LED	Lights if VINSON Buffer/Ring Detector CCA malfunctions.
Ⓜ	Fault	Red LED	Lights if timing source CCA malfunctions or lacks proper input.
Ⓝ	Fault	Red LED	Lights if data channel multiplexer CCA malfunctions or lacks proper input.
Ⓞ	Fault	Red LED	Lights if lamp driver/ring generator CCA malfunctions or lacks proper input.
Ⓟ	Fault	Red LED	Lights if telemetry combiner/generator CCA malfunctions or lacks proper input.
Ⓠ	Out of Frame (OOF)	Red LED	Lights if telemetry decombiner is out of frame.
Ⓡ	Out of Frame (OOF)	Red LED	Lights if input data to the data channel multiplexer is out of frame.

2-3. CIRCUIT CARD ASSEMBLY CONTROLS AND INDICATORS—Continued


A
B
C
D
E
F
G
ON
OFF
1
3
4
5
6
8
ANALOG
BITE 3
SIG A
BRDG A
AMPL A
OW INTFC
GP FRG
DVOW MUX
VBRD
TMG SCE
BRDG D
DCM
DCM
LDRG
ALM INTFC
M
L
K
J
I
H

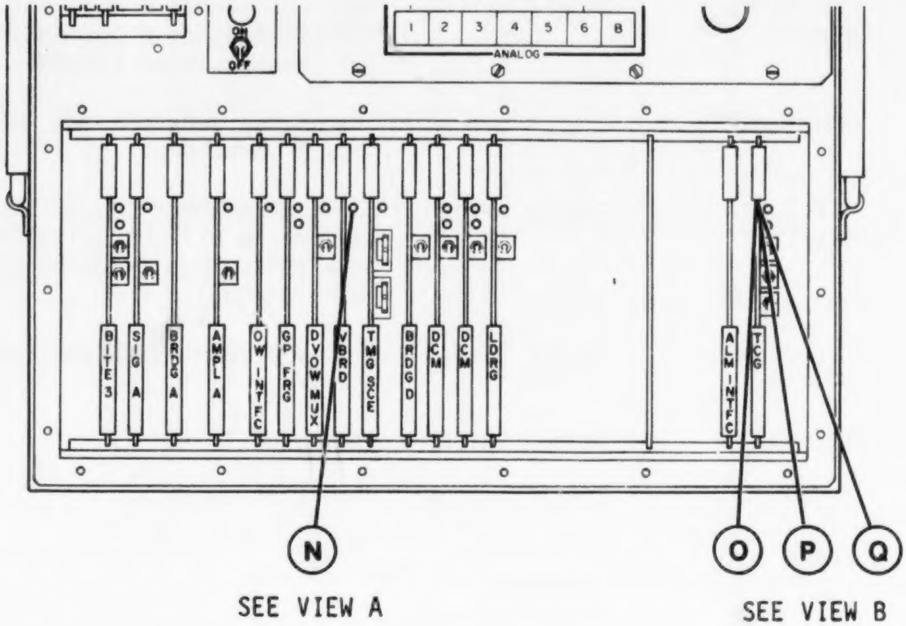
EL9AS018

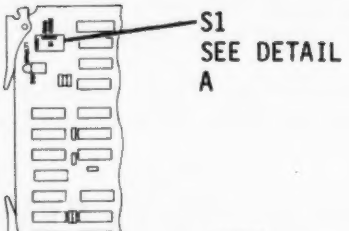
Key	Name	Type	Function
Ⓐ	BIT RATE 2/16	Toggle Switch	Selects 2 kHz (lever down) or 16 kHz (lever up) timing to drive pseudo random generator and error detector.
Ⓑ	MUX ON/OFF	Toggle Switch	Turns the DVOW Mux ON or OFF.
Ⓒ	GROUP 1	13 Position Thumbwheel Switch	Selects timing frequency for Group 1.

2-3. CIRCUIT CARD ASSEMBLY CONTROLS AND INDICATORS—Continued

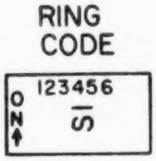
Key	Name	Type	Function
Ⓓ	PVT TO MG ON/OFF	Toggle Switch	Selects either normal operation (TERMINATE) of P and MG channels or connects them together (THROUGH).
Ⓔ	DCM ON/OFF	Toggle Switch	Turns the data channel multiplexer No. 1 ON or OFF.
Ⓕ	PVT CHAN MUX/EXT	Toggle Switch	Selects whether the 12th group orderwire will be multiplexed into the DVOW group or an external orderwire channel.
Ⓖ	TD1 ON/OFF	Toggle Switch	Turns telemetry decombiner 1 ON of OFF.
Ⓗ	TD2 ON/OFF	Toggle Switch	Not used in OCU-II.
Ⓘ	TD3 ON/OFF	Toggle Switch	Not used in OCU-II.
Ⓙ	GROUP 2	13 Position Thumbwheel Switch	Selects timing frequency for Group 2.
Ⓚ	MOW LOOP/NORM	Toggle Switch	Loops input signal through A/D, D/A conversion for test purposes. FAULT LED lights in loop mode.
Ⓛ	SELF RING TEST/OFF	Momentary Toggle Switch	In TEST position allows testing of AVOW circuits ring detection circuits.
Ⓜ	PRG ON/OFF	Toggle Switch	PRG ON enables ERROR LED, starts pseudo random generator.

2-3. CIRCUIT CARD ASSEMBLY CONTROLS AND INDICATORS—Continued

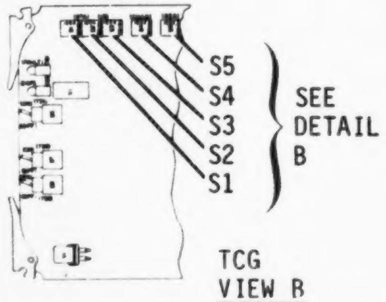

ON
OFF
1
2
3
4
5
6
8
ANALOG
BITE 3
SIG A
BRDG A
AMPL A
OW INTFC
GP FRG
DVOW MUX
VBRD
TMG SCE
BRDG D
DCM
DCM
LDRG
ALM INTFC
TCG
N
O
P
Q
SEE VIEW A
SEE VIEW B


S1
SEE DETAIL
A

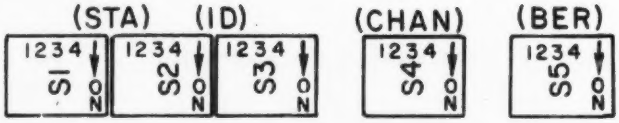
VBRD
VIEW A


RING
CODE
123456
ON
S1

DETAIL A


S5
S4
S3
S2
S1
SEE
DETAIL
B

TCG
VIEW B


(STA)
(ID)
(CHAN)
(BER)
1234
S1
ON
1234
S2
ON
1234
S3
ON
1234
S4
ON
1234
S5
ON

DETAIL B

EL9AS019

2-3. CIRCUIT CARD ASSEMBLY CONTROLS AND INDICATORS—Continued

Key	Name	Type	Function
Ⓝ	RING CODE	6 Pole Dip Slide Actuator Switch	Selects one of 16 possible receiving digital ring codes for DVOW.
Ⓞ	STATION ID	4 Pole Dip Slide Actuator Switch	Three 4-pole switches (12 poles total). Establishes unique 3-character station identification alphanumeric for each OCU-II.
Ⓟ	CHAN	4 Pole Dip Slide Actuator Switch	Selects telemetry combiner sub-channel for local DOW data.
Ⓠ	BER	4 Pole Dip Slide Actuator Switch	Sets BER threshold reference number.

Section II. OPERATOR PREVENTIVE MAINTENANCE CHECKS AND SERVICES

2-4. GENERAL

To be sure that your equipment is always ready for your mission, you must do scheduled preventive maintenance checks and services (PMCS). The scheduled inspections allow defects to be discovered and corrected before they result in serious damage or failure.

2-5. OPERATOR PMCS TABLE

A PMCS table for the OCU-II is provided below. There is one category or interval of PMCS: W. It heads the INTERVAL column of the PMCS table. A dot in the INTERVAL column indicates the check and/or service that you should perform at a particular time.

a. W stands for weekly. W - PMCS are important preventive maintenance checks and services you make at weekly intervals to keep serious problems from suddenly happening. You should perform W - PMCS if:

- You are the assigned operator and have not operated the item since the last W - PMCS.
- You are operating the item for the first time.

b. If your equipment fails to operate. Troubleshoot with proper equipment. Report any deficiencies using the proper forms (see DA Pam 738-750).

NOTE

Use your PMCS table Item no. column to get the number for the TM ITEM NO. column of DA Form 2404 (Equipment Inspection and Maintenance Worksheet) when recording results of PMCS.

2-5. OPERATOR PMCS TABLE—Continued

NOTE

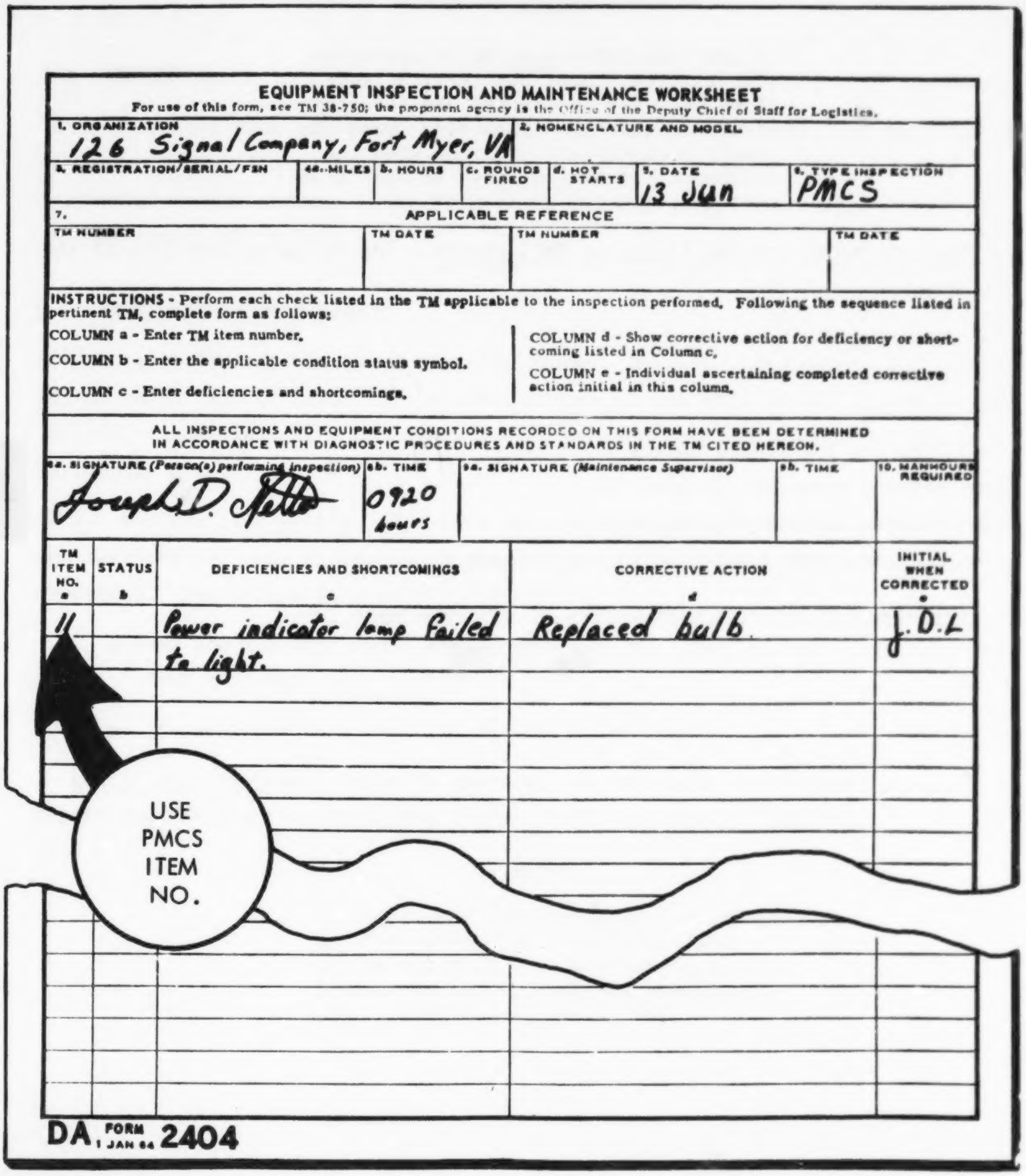
If your equipment must be in operation all the time, check and service those items that can be checked and serviced without disturbing operation. Make the complete checks and services when the equipment can be shut down or when orderwire channels are available.

c. Routine checks are not listed as PMCS checks. The following are some of the routine checks:

- Cleaning
- Washing
- Dusting
- Checking for frayed cables
- Storing items not in use
- Covering unused receptacles
- Check for loose nuts, bolts, and screws

d. You should perform routine checks as the need comes up.

2-5. OPERATOR PMCS TABLE—Continued



EQUIPMENT INSPECTION AND MAINTENANCE WORKSHEET

For use of this form, see TM 38-750; the proponent agency is the Office of the Deputy Chief of Staff for Logistics.

1. ORGANIZATION 126 Signal Company, Fort Myer, VA				2. NOMENCLATURE AND MODEL		
3. REGISTRATION/SERIAL/FSN	4a. MILES	b. HOURS	c. ROUNDS FIRED	d. HOT STARTS	5. DATE 13 Jun	6. TYPE INSPECTION PMCS

7. APPLICABLE REFERENCE			
TM NUMBER	TM DATE	TM NUMBER	TM DATE

INSTRUCTIONS - Perform each check listed in the TM applicable to the inspection performed. Following the sequence listed in pertinent TM, complete form as follows:

COLUMN a - Enter TM item number.

COLUMN b - Enter the applicable condition status symbol.

COLUMN c - Enter deficiencies and shortcomings.

COLUMN d - Show corrective action for deficiency or shortcoming listed in Column c.

COLUMN e - Individual ascertaining completed corrective action initial in this column.

ALL INSPECTIONS AND EQUIPMENT CONDITIONS RECORDED ON THIS FORM HAVE BEEN DETERMINED IN ACCORDANCE WITH DIAGNOSTIC PROCEDURES AND STANDARDS IN THE TM CITED HEREON.

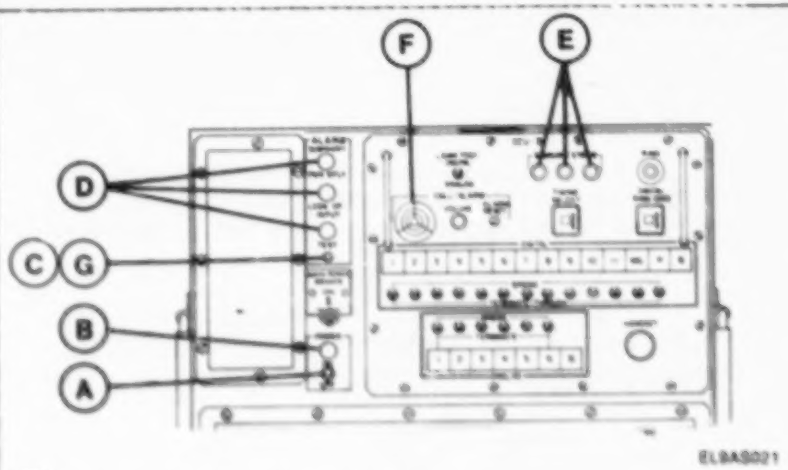
8a. SIGNATURE (Person(s) performing inspection) Joseph D.	8b. TIME 0920 hours	9a. SIGNATURE (Maintenance Supervisor)	9b. TIME	10. MANHOURS REQUIRED

TM ITEM NO. a	STATUS b	DEFICIENCIES AND SHORTCOMINGS c	CORRECTIVE ACTION d	INITIAL WHEN CORRECTED e
11		Power indicator lamp failed to light.	Replaced bulb.	J.D.L

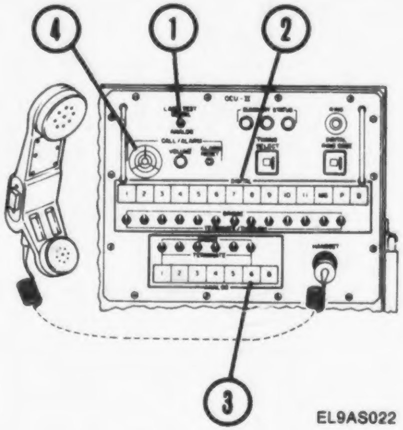
DA FORM 1 JAN 64 2404

EL9AS020

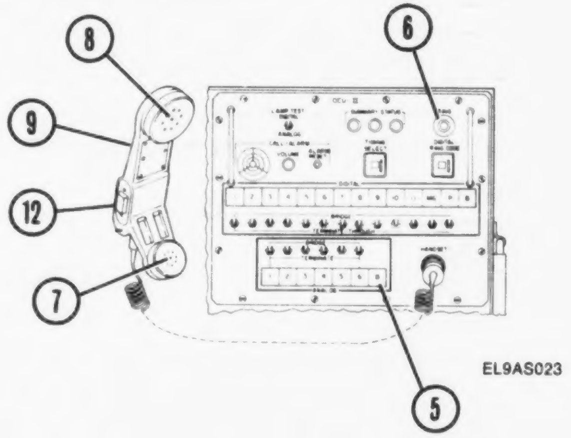
2-5. OPERATOR PMCS TABLE—Continued

Item No.	Interval W	Item to be Inspected	Procedures Check and Have Repaired or Adjusted as Necessary	For Readiness Reporting: Equipment is not Ready/Available IF:
1	●	OCU-II BITE Test		
			Ⓐ Set POWER ON/OFF switch to ON.	
			Ⓑ POWER lamp lights.	POWER lamp does not light.
			Ⓒ Press ALARM TEST switch.	
			Ⓓ ALARM (SUMMARY, PWR SPLY, and LOSS OF INPUT) lamps light.	ALARM (SUMMARY, PWR SPLY, and LOSS OF INPUT) lamps do not light.
			Ⓔ STATUS lamps (Red, Amber, Green) light on control panel.	STATUS lamps (R, A,G) do not light
			Ⓕ CALL/ALARM sounds.	ALARM does not sound.
			Ⓖ Release ALARM TEST switch.	ALARM lamps stay on.

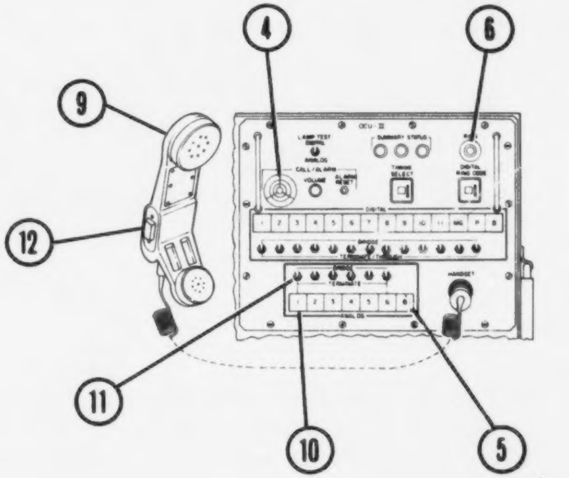
2-5. OPERATOR PMCS TABLE—Continued

Item No.	Interval W	Item to be Inspected	Procedures Check and Have Repaired or Adjusted as Necessary	For Readiness Reporting: Equipment is not Ready/Available IF:
2	●	Control Panel Indicator Lamps	 EL9AS022	
			a. Momentarily set LAMP TEST switch (1) to DIGITAL; all DIGITAL switch/indicators (2) come on, and CALL/ALARM (4) sounds.	One or more indicators do not come on or alarm does not sound.
			b. Momentarily set LAMP TEST switch (1) to ANALOG; all ANALOG switch/indciators (3) come on, and CALL/ALARM (4) sounds.	One or more indicators do not come on or alarm does not sound.

2-5. OPERATOR PMCS TABLE—Continued

Item No.	Interval W	Item to be Inspected	Procedures Check and Have Repaired or Adjusted as Necessary	For Readiness Reporting: Equipment is not Ready/Available IF:
3	●	Handset Test	a. Pick up Handset (9).  	
			b. Press ANALOG B switch/indicator (5); ANALOG B switch/indicator comes on.	Indicator does not come on.
			c. Momentarily press RING pushbutton (6); ring tone is heard in receiver.	Ring tone is not heard in receiver.
			d. Press the PPT pushbutton (12) and talk into microphone (7); your voice is heard in receiver (8).	Voice is not heard in receiver.

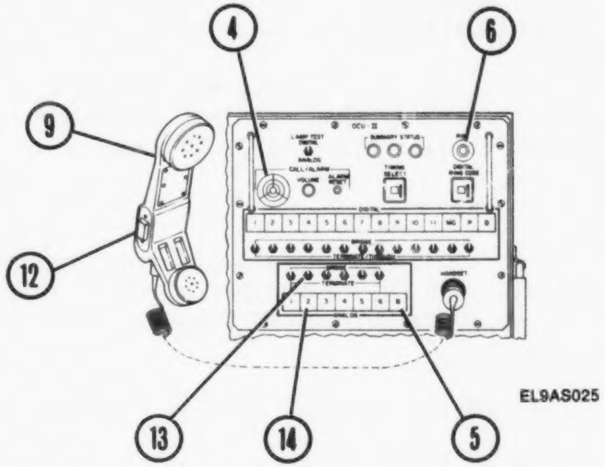
2-5. OPERATOR PMCS TABLE—Continued

Item No.	Interval W	Item to be Inspected	Procedures Check and Have Repaired or Adjusted as Necessary	For Readiness Reporting: Equipment is not Ready/Available IF:
4	●	AVOW Channel 1 (if used)	a. Pick up Handset (9).  EL9AS024	
			b. Press the ANALOG 1 switch/indicator (10); ANALOG 1 switch/indicator (10) comes on.	Indicator does not come on.
			c. Momentarily press the RING pushbutton (6); ring tone is heard in handset for 2 seconds and called party answers.	Ring tone is not heard or called party does not answer.
			d. Press PTT button (12). Tell the party you are performing a line check, and ask them to return your call.	Party can not hear you.
			e. Press the ANALOG 1 switch/indicator (10); ANALOG 1 switch/indicator (10) goes off.	Indicator does not go off.

2-5. OPERATOR PMCS TABLE—Continued

Item No.	Interval W	Item to be Inspected	Procedures Check and Have Repaired or Adjusted as Necessary	For Readiness Reporting: Equipment is not Ready/Available IF:
4 (Cont)	●	AVOW Channel 1 (Cont)	f. Wait for party to return your call; CALL/ALARM (4) sounds and ANALOG 1 switch/indicator (10) flashes.	Alarm does not sound or indicator does not flash.
			g. Press the ANALOG 1 switch/indicator (10); ANALOG 1 switch/indicator (10) comes on continuously and CALL/ALARM (4) is silent.	Indicator does not come on continuously or CALL/ALARM sounds.
			h. Press PTT button (12). Ask party to hold.	
			i. Set ANALOG 1 BRIDGE/TERMINATE switch (11) to BRIDGE.	
			j. Press the ANALOG B switch/indicator (5); ANALOG 1 switch/indicator (10) goes off and ANALOG B switch/indicator (5) comes on.	ANALOG 1 indicator does not go off or ANALOG B indicator does not come on.
			k. Press PTT button (12). Talk with the party, tell them the test has been completed and ask them to clear the line.	You can not hear party or speak to party.
			l. Press the ANALOG B switch/indicator (5); ANALOG B switch/indicator (5) goes off.	Indicator does not go off.
			m. Set the ANALOG 1 BRIDGE/TERMINATE switch (11) to TERMINATE.	

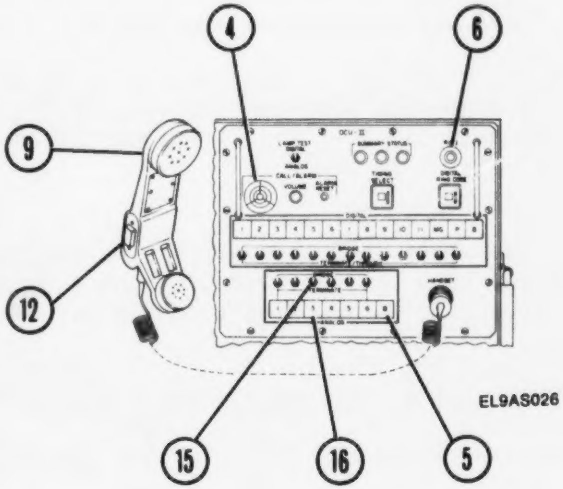
2-5. OPERATOR PMCS TABLE—Continued

Item No.	Interval W	Item to be Inspected	Procedures Check and Have Repaired or Adjusted as Necessary	For Readiness Reporting: Equipment is not Ready/Available IF:
5	●	AVOW Channel 2 (if used)	a. Pick up handset (9). 	
			b. Press the ANALOG 2 switch/indicator (14); ANALOG 2 switch/indicator (14) comes on.	Indicator does not come on.
			c. Momentarily press the RING pushbutton (6); ring tone is heard in handset for 2 seconds and called party answers.	Ring tone is not heard or called party does not answer.
			d. Press PTT button (12). Tell the party you are performing a line check, and ask them to return your call.	Party can not hear you.
			e. Press the ANALOG 2 switch/indicator (14); ANALOG 2 switch/indicator (14) goes off.	Indicator does not go off.

2-5. OPERATOR PMCS TABLE—Continued

Item No.	Interval W	Item to be Inspected	Procedures Check and Have Repaired or Adjusted as Necessary	For Readiness Reporting: Equipment is not Ready/Available IF:
5 (Cont)	●	AVOW Channel 2 (Cont)	f. Wait for party to return your call; CALL/ALARM (4) sounds and ANALOG 2 switch/indicator (14) flashes.	Alarm does not sound or indicator does not flash.
			g. Press the ANALOG 2 switch/indicator (14); ANALOG 2 switch/indicator (14) comes on continuously and CALL/ALARM (4) is silent.	Indicator does not come on continuously or CALL/ ALARM sounds.
			h. Press PTT button (12). Ask party to hold.	
			i. Set ANALOG 2 BRIDGE/TERMINATE switch (13) to BRIDGE.	
			j. Press the ANALOG B switch/indicator (5); ANALOG 2 switch/indicator (14) goes off and ANALOG B switch/indicator (5) comes on.	ANALOG 2 indicator does not go off or ANALOG B indicator does not come on.
			k. Press PTT button (12). Talk with the party, tell them the test has been completed and ask them to clear the line.	You can not hear party or speak to party.
			l. Press the ANALOG B switch/indicator (5); ANALOG B switch/indicator (5) goes off.	Indicator does not go off.
			m. Set the ANALOG 2 BRIDGE/TERMINATE switch (13) to TERMINATE.	

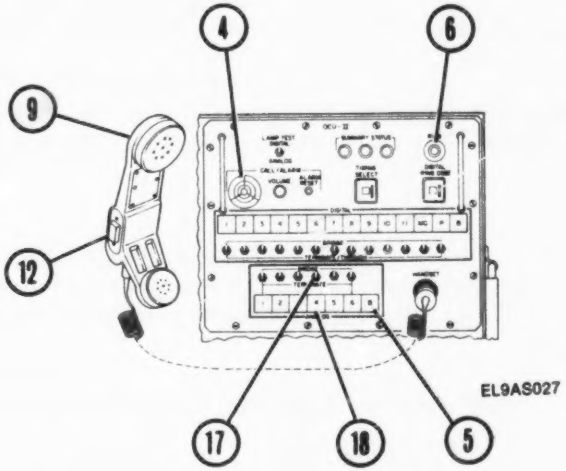
2-5. OPERATOR PMCS TABLE—Continued

Item No.	Interval W	Item to be Inspected	Procedures Check and Have Repaired or Adjusted as Necessary	For Readiness Reporting: Equipment is not Ready/Available IF:
6	●	AVOW Channel 3 (if used)	a. Pick up handset (9). 	
			b. Press the ANALOG 3 switch/indicator (16); ANALOG 3 switch/indicator (16) comes on.	Indicator does not come on.
			c. Momentarily press the RING pushbutton (6); ring tone is heard in handset for 2 seconds and called party answers.	Ring tone is not heard or called party does not answer.
			d. Press PTT button (12). Tell the party you are performing a line check, and ask them to return your call.	Party can not hear you.
			e. Press the ANALOG 3 switch/indicator (16); ANALOG 3 switch/indicator (16) goes off.	Indicator does not go off.

2-5. OPERATOR PMCS TABLE—Continued

Item No.	Interval W	Item to be Inspected	Procedures Check and Have Repaired or Adjusted as Necessary	For Readiness Reporting: Equipment is not Ready/Available IF:
6 (Cont)	●	AVOW Channel (Cont)	f. Wait for party to return your call; CALL/ALARM (4) sounds and ANALOG 3 switch/indicator (16) flashes.	Alarm does not sound or indicator does not flash.
			g. Press the ANALOG 3 switch/indicator (16); ANALOG 3 switch/indicator (16) comes on continuously and CALL/ALARM (4) is silent.	Indicator does not come on continuously or CALL/ ALARM sounds.
			h. Press PTT button (12). Ask party to hold.	
			i. Set ANALOG 3 BRIDGE/TERMINATE switch (15) to BRIDGE.	
			j. Press the ANALOG B switch/indicator (5); ANALOG 3 switch/indicator (16) goes off and ANALOG B switch/indicator (5) comes on.	ANALOG 3 indicator does not go off or ANALOG B indicator does not come on.
			k. Press PTT button (12). Talk with the party, tell them the test has been completed and ask them to clear the line.	You can not hear party or speak to party.
			l. Press the ANALOG B switch/indicator (5); ANALOG B switch/indicator (5) goes off.	Indicator does not go off.
			m. Set the ANALOG 3 BRIDGE/TERMINATE switch (15) to TERMINATE.	

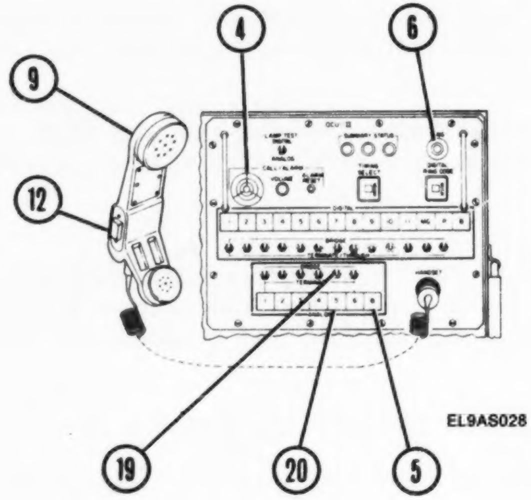
2-5. OPERATOR PMCS TABLE—Continued

Item No.	Interval W	Item to be Inspected	Procedures Check and Have Repaired or Adjusted as Necessary	For Readiness Reporting: Equipment is not Ready/Available IF:
7	●	AVOW Channel 4 (if used)	a. Pick up handset (9).  	
			b. Press the ANALOG 4 switch/indicator (18); ANALOG 4 switch/indicator (18) comes on.	Indicator does not come on.
			c. Momentarily press the RING pushbutton (6); ring tone is heard in handset for 2 seconds and called party answers.	Ring tone is not heard or called party does not answer.
			d. Press PTT button (12). Tell the party you are performing a line check, and ask them to return your call.	Party can not hear you.
			e. Press the ANALOG 4 switch/indicator (18); ANALOG 4 switch/indicator (18) goes off.	Indicator does not go off.

2-5. OPERATOR PMCS TABLE—Continued

Item No.	Interval W	Item to be Inspected	Procedures Check and Have Repaired or Adjusted as Necessary	For Readiness Reporting: Equipment is not Ready/Available IF:
7 (Cont)	●	AVOW Channel 4 (Cont)	f. Wait for party to return your call; CALL/ALARM (4) sounds and ANALOG 4 switch/indicator (18) flashes.	Alarm does not sound or indicator does not flash.
			g. Press the ANALOG 4 switch/indicator (18); ANALOG 4 switch/indicator (18) comes on continuously and CALL/ALARM (4) is silent.	Indicator does not come on continuously or CALL/ ALARM sounds.
			h. Press PTT button (12). Ask party to hold.	
			i. Set ANALOG 4 BRIDGE/TERMINATE switch (17) to BRIDGE.	
			j. Press the ANALOG B switch/indicator (5); ANALOG 4 switch/indicator (18) goes off and ANALOG B switch/indicator (5) comes on.	ANALOG 4 indicator does not go off or ANALOG B indicator does not come on.
			k. Press PTT button (12). Talk with the party, tell them the test has been completed and ask them to clear the line.	You can not hear party or speak to party.
			l. Press the ANALOG B switch/indicator (5); ANALOG B switch/indicator (5) goes off.	Indicator does not go off.
			m. Set the ANALOG 4 BRIDGE/TERMINATE switch (17) to TERMINATE.	

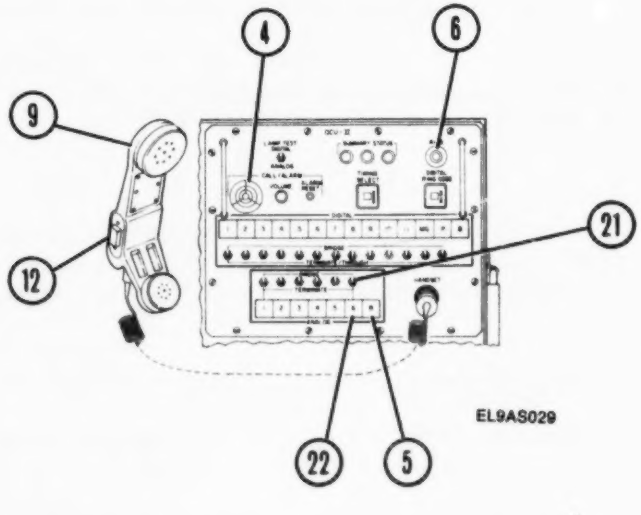
2-5. OPERATOR PMCS TABLE—Continued

Item No.	Interval W	Item to be Inspected	Procedures Check and Have Repaired or Adjusted as Necessary	For Readiness Reporting: Equipment is not Ready/Available IF:
8	●	AVOW Channel 5 (not used)	a. Pick up handset (9).  EL9AS028	
			b. Press the ANALOG 5 switch/indicator (20); ANALOG 5 switch/indicator (20) comes on.	Indicator does not come on.
			c. Momentarily press the RING pushbutton (6); ring tone is heard in handset for 2 seconds and called party answers.	Ring tone is not heard or called party does not answer.
			d. Press PTT button (12). Tell the party you are performing a line check, and ask them to return your call.	Party can not hear you.
			e. Press the ANALOG 5 switch/indicator (20); ANALOG 5 switch/indicator (20) goes off.	Indicator does not go off.

2-5. OPERATOR PMCS TABLE—Continued

Item No.	Interval W	Item to be Inspected	Procedures Check and Have Repaired or Adjusted as Necessary	For Readiness Reporting: Equipment is not Ready/Available IF:
8 (Cont)	●	AVOW Channel 5 (Cont)	f. Wait for party to return your call; CALL/ALARM (4) sounds and ANALOG 5 switch/indicator (20) flashes.	Alarm does not sound or indicator does not flash.
			g. Press the ANALOG 5 switch/indicator (20); ANALOG 5 switch/indicator (20) comes on continuously and CALL/ALARM (4) is silent.	Indicator does not come on continuously or CALL/ ALARM sounds.
			h. Press PTT button (12). Ask party to hold.	
			i. Set ANALOG 5 BRIDGE/TERMINATE switch (19) to BRIDGE.	
			j. Press the ANALOG B switch/indicator (5); ANALOG 5 switch/indicator (20) goes off and ANALOG B switch/indicator (5) comes on.	ANALOG 5 indicator does not go off or ANALOG B indicator does not come on.
			k. Press PTT button (12). Talk with the party, tell them the test has been completed and ask them to clear the line.	You can not hear party or speak to party.
			l. Press the ANALOG B switch/indicator (5); ANALOG B switch/indicator (5) goes off.	Indicator does not go off.
			m. Set the ANALOG 5 BRIDGE/TERMINATE switch (19) to TERMINATE.	

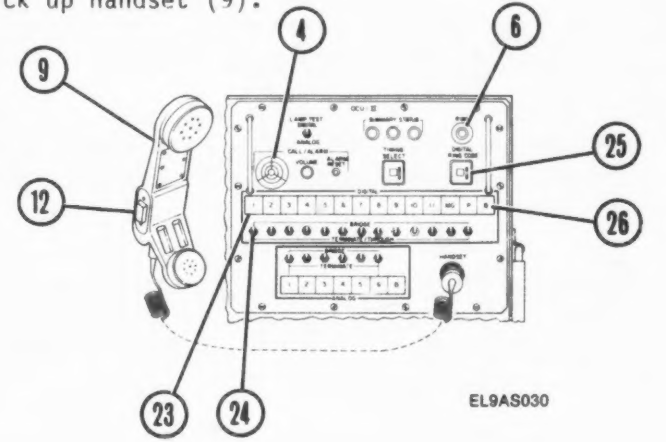
2-5. OPERATOR PMCS TABLE—Continued

Item No.	Interval W	Item to be Inspected	Procedures Check and Have Repaired or Adjusted as Necessary	For Readiness Reporting: Equipment is not Ready/Available IF:
9	●	AVOW Channel 6 (if used)	a. Pick up handset (9). 	
			b. Press the ANALOG 6 switch/indicator (22); ANALOG 6 switch/indicator (22) comes on.	Indicator does not come on.
			c. Momentarily press the RING pushbutton (6); ring tone is heard in handset for 2 seconds and called party answers.	Ring tone is not heard or called party does not answer.
			d. Press PTT button (12). Tell the party you are performing a line check, and ask them to return your call.	Party can not hear you.
			e. Press the ANALOG 6 switch/indicator (22); ANALOG 6 switch/indicator (22) goes off.	Indicator does not go off.

2-5. OPERATOR PMCS TABLE—Continued

Item No.	Interval W	Item to be Inspected	Procedures Check and Have Repaired or Adjusted as Necessary	For Readiness Reporting: Equipment is not Ready/Available IF
9 (Cont)	●	AVOW Channel 6 (Cont)	f. Wait for party to return your call; CALL/ALARM (4) sounds and ANALOG 6 switch/indicator (22) flashes.	Alarm does not sound or indicator does not flash.
			g. Press the ANALOG 6 switch/indicator (22); ANALOG 6 switch/indicator (22) comes on continuously and CALL/ALARM (4) is silent.	Indicator does not come on continuously or CALL/ALARM sounds.
			h. Press PTT button (12). Ask party to hold.	
			i. Set ANALOG 6 BRIDGE/TERMINATE switch (21) to BRIDGE.	
			j. Press the ANALOG B switch/indicator (5); ANALOG 6 switch/indicator (22) goes off and ANALOG B switch/indicator (5) comes on.	ANALOG 6 indicator does not go off or ANALOG B indicator does not come on.
			k. Press PTT button (12). Talk with the party, tell them the test has been completed and ask them to clear the line.	You can not hear party or speak to party.
			l. Press the ANALOG B switch/indicator (5); ANALOG B switch/indicator (5) goes off.	Indicator does not go off.
			m. Set the ANALOG 6 BRIDGE/TERMINATE switch (21) to TERMINATE.	

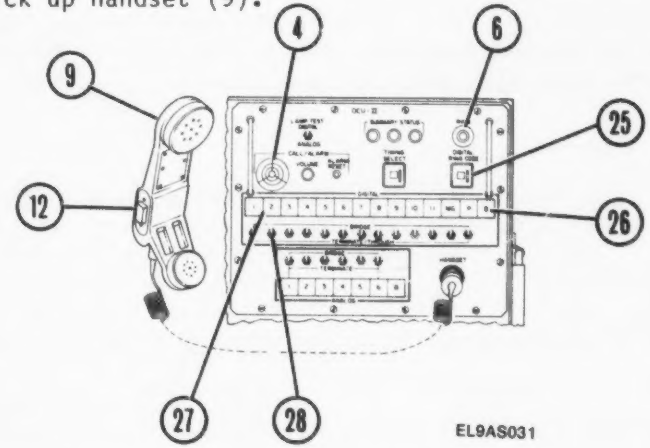
2-5. OPERATOR PMCS TABLE—Continued

Item No.	Interval W	Item to be Inspected	Procedures Check and Have Repaired or Adjusted as Necessary	For Readiness Reporting: Equipment is not Ready/Available IF:
10	●	DVOW Channel 1 (if used)	a. Pick up handset (9). 	
			b. Press the DIGITAL 1 switch/indicator (23); DIGITAL 1 switch/indicator (23) comes on.	Indicator does not come on.
			c. Listen to make sure the line is clear before proceeding with this test. If the line is not clear, press DIGITAL 1 switch/indicator (23) again; DIGITAL 1 switch/indicator (23) goes off. Wait until the line is clear, then repeat steps b. and c.	Indicator stays on.
			d. Set the DIGITAL RING CODE switch (25) to the number of a station on channel 1.	
			e. Momentarily press the RING pushbutton (6); called party answers.	Called party does not answer.
			f. Press the PTT pushbutton (12) and tell the party you are performing a line check, then ask them to return your call.	Party cannot hear you or you cannot hear party.

2-5. OPERATOR PMCS TABLE—Continued

Item No.	Interval W	Item to be Inspected	Procedures Check and Have Repaired or Adjusted as Necessary	For Readiness Reporting: Equipment is not Ready/Available IF:
10 (Cont)	●	DVOW Channel 1 (Cont)	g. Press the DIGITAL 1 switch/indicator (23); DIGITAL 1 switch/indicator (23) goes off.	Indicator does not go off.
			h. Wait for party to return your call; CALL/ALARM (4) sounds and DIGITAL 1 switch/indicator (23) flashes.	Alarm does not sound or indicator does not flash.
			i. Press the DIGITAL 1 switch/indicator (23); DIGITAL 1 switch/indicator (23) comes on continuously and CALL/ALARM (4) is silent.	Indicator does not come on continuously or CALL/ALARM sounds.
			j. Press the PTT pushbutton (12) and ask the party to hold.	
			k. Set DIGITAL 1 BRIDGE-TERMINATE/THROUGH switch (24) to BRIDGE.	
			l. Press the DIGITAL B switch/indicator (26); DIGITAL 1 switch/indicator (23) goes off and DIGITAL B switch/indicator (26) comes on.	DIGITAL 1 indicator does not go off or DIGITAL B indicator does not come on.
			m. Press the PTT pushbutton (12) and talk with the party. Tell them the test has been completed and ask them to clear the line.	You cannot speak to the party or hear the party.
			n. Press the DIGITAL B switch/indicator (26); DIGITAL B switch/indicator (26) goes off.	Indicator does not go off.
			o. Set the DIGITAL 1 BRIDGE-TERMINATE/THROUGH switch (24) to TERMINATE/THROUGH.	

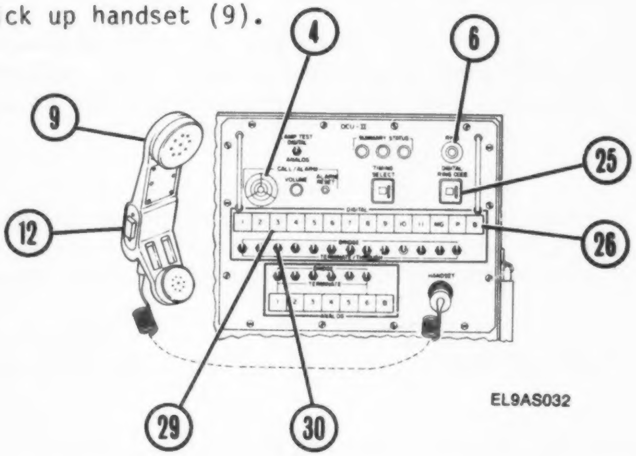
2-5. OPERATOR PMCS TABLE—Continued

Item No.	Interval W	Item to be Inspected	Procedures Check and Have Repaired or Adjusted as Necessary	For Readiness Reporting: Equipment is not Ready/Available IF:
11	●	DVOW Channel 2 (if used)	a. Pick up handset (9).  	
			b. Press the DIGITAL 2 switch/indicator (27); DIGITAL 2 switch/indicator (27) comes on.	Indicator does not come on.
			c. Listen to make sure the line is clear before proceeding with this test. If the line is not clear, press DIGITAL 2 switch/indicator (27) again; DIGITAL 2 switch/indicator (27) goes off. Wait until the line is clear, then repeat steps b. and c.	Indicator stays on.
			d. Set the DIGITAL RING CODE switch (25) to the number of a station on channel 2.	
			e. Momentarily press the RING pushbutton (6); called party answers.	Called party does not answer.
			f. Press the PTT pushbutton (12) and tell the party you are performing a line check, then ask them to return your call.	Party cannot hear you or you cannot hear party.

2-5. OPERATOR PMCS TABLE—Continued

Item No.	Interval W	Item to be Inspected	Procedures Check and Have Repaired or Adjusted as Necessary	For Readiness Reporting: Equipment is not Ready/Available IF:
11 (Cont)	●	DVOW Channel 2 (Cont)	g. Press the DIGITAL 2 switch/indicator (27); DIGITAL 2 switch/indicator (27) goes off.	Indicator does not go off.
			h. Wait for party to return your call; CALL/ALARM (4) sounds and DIGITAL 2 switch/indicator (27) flashes.	Alarm does not sound or indicator does not flash.
			i. Press the DIGITAL 2 switch/indicator (27); DIGITAL 2 switch/indicator (27) comes on continuously and CALL/ALARM (4) is silent.	Indicator does not come on continuously or CALL/ALARM sounds.
			j. Press the PTT pushbutton (12) and ask the party to hold.	
			k. Set DIGITAL 2 BRIDGE-TERMINATE/THROUGH switch (28) to BRIDGE.	
			l. Press the DIGITAL B switch/indicator (26); DIGITAL 2 switch/indicator (27) goes off and DIGITAL B switch/indicator (26) comes on.	DIGITAL 2 indicator does not go off or DIGITAL B indicator does not come on.
			m. Press the PTT pushbutton (12) and talk with the party. Tell them the test has been completed and ask them to clear the line.	You cannot speak to the party or hear the party.
			n. Press the DIGITAL B switch/indicator (26); DIGITAL B switch/indicator (26) goes off.	Indicator does not go off.
			o. Set the DIGITAL 2 BRIDGE-TERMINATE/THROUGH switch (28) to TERMINATE/THROUGH.	

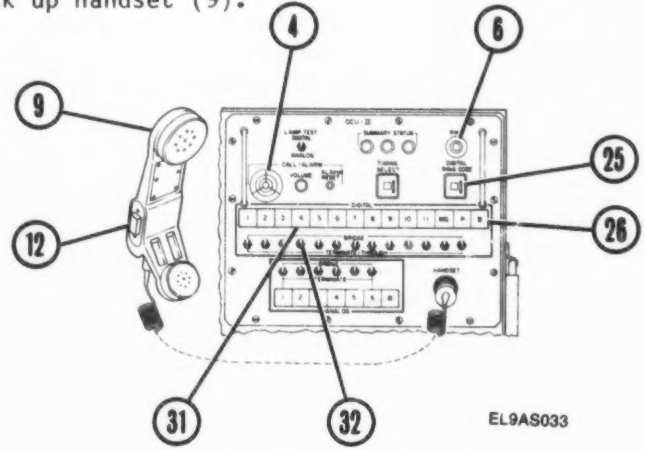
2-5. OPERATOR PMCS TABLE—Continued

Item No.	Interval W	Item to be Inspected	Procedures Check and Have Repaired or Adjusted as Necessary	For Readiness Reporting: Equipment is not Ready/Available IF:
12	●	DVOW Channel 3 (if used)	a. Pick up handset (9).  	
			b. Press the DIGITAL 3 switch/indicator (29); DIGITAL 3 switch/indicator (29) comes on.	Indicator does not come on.
			c. Listen to make sure the line is clear before proceeding with this test. If the line is not clear, press DIGITAL 3 switch/indicator (29) again; DIGITAL 3 switch/indicator (29) goes off. Wait until the line is clear, then repeat steps b. and c.	Indicator stays on.
			d. Set the DIGITAL RING CODE switch (25) to the number of a station on channel 3.	
			e. Momentarily press the RING pushbutton (6); called party answers.	Called party does not answer.
			f. Press the PTT pushbutton (12) and tell the party you are performing a line check, then ask them to return your call.	Party cannot hear you or you cannot hear party.

2-5. OPERATOR PMCS TABLE—Continued

Item No.	Interval W	Item to be Inspected	Procedures Check and Have Repaired or Adjusted as Necessary	For Readiness Reporting: Equipment is not Ready/Available IF:
12 (Cont)	●	DVOW Channel 3 (Cont)	g. Press the DIGITAL 3 switch/indicator (29); DIGITAL 3 switch/indicator (29) goes off.	Indicator does not go off.
			h. Wait for party to return your call; CALL/ALARM (4) sounds and DIGITAL 3 switch/indicator (29) flashes.	Alarm does not sound or indicator does not flash.
			i. Press the DIGITAL 3 switch/indicator (29); DIGITAL 3 switch/indicator (29) comes on continuously and CALL/ALARM (4) is silent.	Indicator does not come on continuously or CALL/ ALARM sounds.
			j. Press the PTT pushbutton (12) and ask the party to hold.	
			k. Set DIGITAL 3 BRIDGE-TERMINATE/THROUGH switch (30) to BRIDGE.	
			l. Press the DIGITAL B switch/indicator (26); DIGITAL 3 switch/indicator (29) goes off and DIGITAL B switch/indicator (26) comes on.	DIGITAL 3 indicator does not go off or DIGITAL B indicator does not come on.
			m. Press the PTT pushbutton (12) and talk with the party. Tell them the test has been completed and ask them to clear the line.	You cannot speak to the party or hear the party.
			n. Press the DIGITAL B switch/indicator (26); DIGITAL B switch/indicator (26) goes off.	Indicator does not go off.
			o. Set the DIGITAL 3 BRIDGE-TERMINATE/THROUGH switch (30) to TERMINATE/THROUGH.	

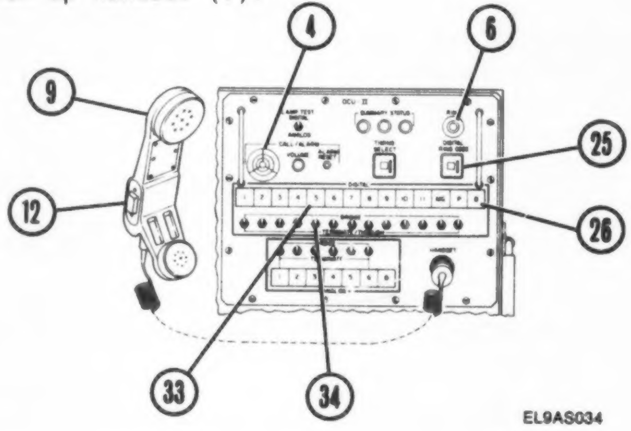
2-5. OPERATOR PMCS TABLE—Continued

Item No.	Interval W	Item to be Inspected	Procedures Check and Have Repaired or Adjusted as Necessary	For Readiness Reporting: Equipment is not Ready/Available IF:
13	●	DVOW Channel 4	a. Pick up handset (9).  	
			b. Press the DIGITAL 4 switch/indicator (31); DIGITAL 4 switch/indicator (31) comes on.	Indicator does not come on.
			c. Listen to make sure the line is clear before proceeding with this test. If the line is not clear, press DIGITAL 4 switch/indicator (31) again; DITIGAL 4 switch/indicator (31) goes off. Wait until the line is clear, then repeat steps b. and c.	Indicator stays on.
			d. Set the DIGITAL RING CODE switch (25) to the number of a station on channel 4.	
			e. Momentarily press the RING pushbutton (6); called party answers.	Called party does not answer.
			f. Press the PTT pushbutton (12) and tell the party you are performing a line check, then ask them to return your call.	Party cannot hear you or you cannot hear party.

2-5. OPERATOR PMCS TABLE—Continued

Item No.	Interval W	Item to be Inspected	Procedures Check and Have Repaired or Adjusted as Necessary	For Readiness Reporting: Equipment is not Ready/Available IF:
13 (Cont)	●	DVOW Channel 4 (Cont)	g. Press the DIGITAL 4 switch/indicator (31); DIGITAL 4 switch/indicator (31) goes off.	Indicator does not go off.
			h. Wait for party to return your call; CALL/ALARM (4) sounds and DIGITAL 4 switch/indicator (31) flashes.	Alarm does not sound or indicator does not flash.
			i. Press the DIGITAL 4 switch/indicator (31); DIGITAL 4 switch/indicator (31) comes on continuously and CALL/ALARM (4) is silent.	Indicator does not come on continuously or CALL/ALARM sounds.
			j. Press the PTT pushbutton (12) and ask the party to hold.	
			k. Set DIGITAL 4 BRIDGE-TERMINATE/THROUGH switch (32) to BRIDGE.	
			l. Press the DIGITAL B switch/indicator (26); DIGITAL 4 switch/indicator (31) goes off and DIGITAL B switch/indicator (26) comes on.	DIGITAL 4 indicator does not go off or DIGITAL B indicator does not come on.
			m. Press the PTT pushbutton (12) and talk with the party. Tell them the test has been completed and ask them to clear the line.	You cannot speak to the party or hear the party.
			n. Press the DIGITAL B switch/indicator (26); DIGITAL B switch/indicator (26) goes off.	Indicator does not go out.
			o. Set the DIGITAL 4 BRIDGE-TERMINATE/THROUGH switch (32) to TERMINATE/THROUGH.	Indicator does not go out.

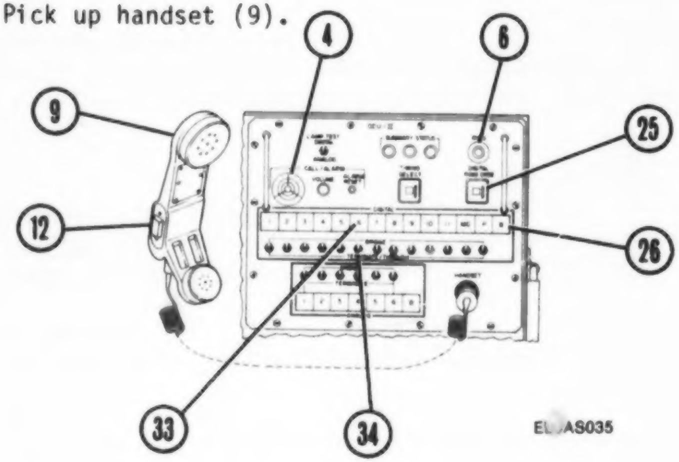
2-5. OPERATOR PMCS TABLE—Continued

Item No.	Interval W	Item to be Inspected	Procedures Check and Have Repaired or Adjusted as Necessary	For Readiness Reporting: Equipment is not Ready/Available IF:
14	●	DVOW Channel 5 (if used)	a. Pick up handset (9).  EL9AS034	
			b. Press the DIGITAL 5 switch/indicator (33); DIGITAL 5 switch/indicator (33) comes on.	Indicator does not come on.
			c. Listen to make sure the line is clear before proceeding with this test. If the line is not clear, press DIGITAL 5 switch/indicator (33) again; DIGITAL 5 switch/indicator (33) goes off. Wait until the line is clear, then repeat steps b. and c.	Indicator stays on.
			d. Set the DIGITAL RING CODE switch (25) to the number of a station on channel 5.	
			e. Momentarily press the RING pushbutton (6); called party answers.	Called party does not answer.
			f. Press the PTT pushbutton (12) and tell the party you are performing a line check, then ask them to return your call.	Party cannot hear you or you cannot hear party.

2-5. OPERATOR PMCS TABLE—Continued

Item No.	Interval W	Item to be Inspected	Procedures Check and Have Repaired or Adjusted as Necessary	For Readiness Reporting: Equipment is not Ready/Available IF:
14 (Cont)	●	DVOW Channel 5 (Cont)	g. Press the DIGITAL 5 switch/indicator (33); DIGITAL 5 switch/indicator (33) goes off.	Indicator does not go off.
			h. Wait for party to return your call; CALL/ALARM (4) sounds and DIGITAL 5 switch/indicator (33) flashes.	Alarm does not sound or indicator does not flash.
			i. Press the DIGITAL 5 switch/indicator (33); DIGITAL 5 switch/indicator (33) comes on continuously and CALL/ALARM (4) is silent.	Indicator does not come on continuously or CALL/ALARM sounds.
			j. Press the PTT pushbutton (12) and ask the party to hold.	
			k. Set DIGITAL 5 BRIDGE-TERMINATE/THROUGH switch (34) to BRIDGE.	
			l. Press the DIGITAL B switch/indicator (26); DIGITAL 5 switch/indicator (33) goes off and DIGITAL B switch/indicator (26) comes on.	DIGITAL 5 indicator does not go off or DIGITAL B indicator does not come on.
			m. Press the PTT bushputton (12) and talk with the party. Tell them the test has been completed and ask them to clear the line.	You cannot speak to the party or hear the party.
			n. Press the DIGITAL B switch/indicator (26); DIGITAL B switch/indicator (26) goes off.	Indicator does not go off.
			o. Set the DIGITAL 5 BRIDGE-TERMINAL/THROUGH (34) to TERMINATE/THROUGH.	

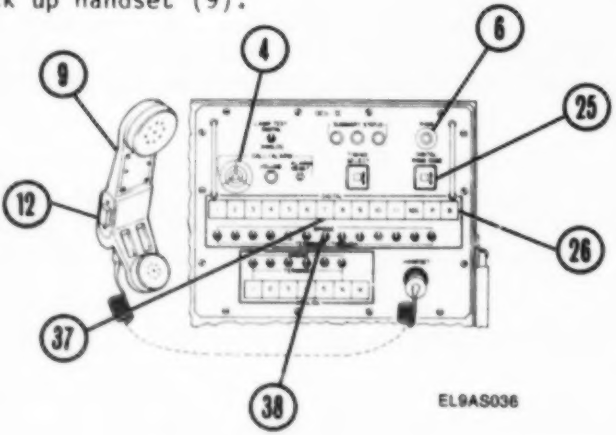
2-5. OPERATOR PMCS TABLE—Continued

Item No.	Interval W	Item to be Inspected	Procedures Check and Have Repaired or Adjusted as Necessary	For Readiness Reporting: Equipment is not Ready/Available IF:
15	●	DVOW Channel 6 (if used)	a. Pick up handset (9).  	
			b. Press the DIGITAL 6 switch/indicator (35); DIGITAL 6 switch/indicator (35) comes on.	Indicator does not come on.
			c. Listen to make sure the line is clear before proceeding with this test. If the line is not clear, press DIGITAL 6 switch/indicator (35) again; DIGITAL 6 switch/indicator (35) goes off. Wait until the line is clear, then repeat steps b. and c.	Indicator stays on.
			d. Set the DIGITAL RING CODE switch (25) to the number of a station on channel 6.	
			e. Momentarily press the RING pushbutton (6); called party answers.	Called party does not answer.
			f. Press the PTT pushbutton (12) and tell the party you are performing a line check, then ask them to return your call.	Party cannot hear you or you cannot hear party.

2-5. OPERATOR PMCS TABLE—Continued

Item No.	Interval W	Item to be Inspected	Procedures Check and Have Repaired or Adjusted as Necessary	For Readiness Reporting: Equipment is not Ready/Available IF:
15 (Cont)	●	DVOW Channel 6 (Cont)	g. Press the DIGITAL 6 switch/indicator (35); DIGITAL 6 switch/indicator (35) goes off.	Indicator does not go off.
			h. Wait for party to return your call; CALL/ALARM (4) sounds and DIGITAL 6 switch/indicator (35) flashes.	Alarm does not sound or indicator does not flash.
			i. Press the DIGITAL 6 switch/indicator (35); DIGITAL 6 switch/indicator (35) comes on continuously and CALL/ALARM (4) is silent.	Indicator does not come on continuously or CALL/ ALARM sounds.
			j. Press the PTT pushbutton (12) and ask the party to hold.	
			k. Set DIGITAL 6 BRIDGE-TERMINATE/THROUGH switch (36) to BRIDGE.	
			l. Press the DIGITAL B switch/indicator (26); DIGITAL 6 switch/indicator (35) goes off and DIGITAL B switch/indicator (26) comes on.	DIGITAL 6 indicator does not go off or DIGITAL B indicator does not come on.
			m. Press the PTT pushbutton (12) and talk with the party. Tell them the test has been completed and ask them to clear the line.	You cannot speak to the party or hear the party.
			n. Press the DIGITAL B switch/indicator (26); DIGITAL B switch/indicator (26) goes off.	Indicator does not go off.
			o. Set the DIGITAL 6 BRIDGE-TERMINATE/THROUGH switch (36) to TERMINATE/THROUGH.	

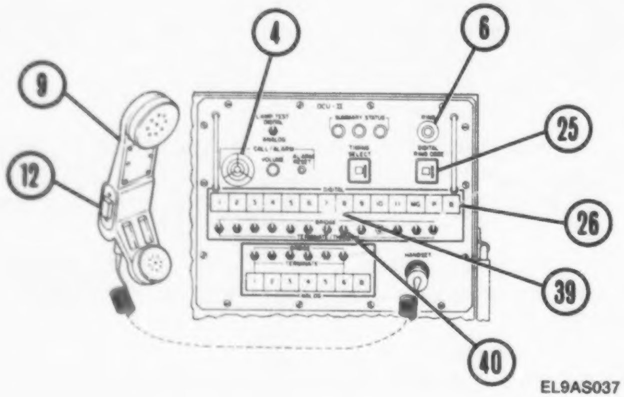
2-5. OPERATOR PMCS TABLE--Continued

Item No.	Interval W	Item to be Inspected	Procedures Check and Have Repaired or Adjusted as Necessary	For Readiness Reporting: Equipment is not Ready/Available IF:
16	●	DVOW Channel 7 (if used)	a. Pick up handset (9). 	
			b. Press the DIGITAL 7 switch/indicator (37); DIGITAL 7 switch/indicator (37) comes on.	Indicator does not come on.
			c. Listen to make sure the line is clear before proceeding with this test. If the line is not clear, press DIGITAL 7 switch/indicator (37) again; DIGITAL 7 switch/indicator (37) goes off. Wait until the line is clear, then repeat steps b. and c.	Indicator stays on.
			d. Set the DIGITAL RING CODE switch (25) to the number of a station on channel 7.	
			e. Momentarily press the RING pushbutton (6); called party answers.	Called party does not answer.
			f. Press the PTT pushbutton (12) and tell the party you are performing a line check, then ask them to return your call.	Party cannot hear you or you cannot hear party.

2-5. OPERATOR PMCS TABLE—Continued

Item No.	Interval W	Item to be Inspected	Procedures Check and Have Repaired or Adjusted as Necessary	For Readiness Reporting: Equipment is not Ready/Available IF:
16 (Cont)	●	DVOW Channel 7 (Cont)	g. Press the DIGITAL 7 switch/indicator (37); DIGITAL 7 switch/indicator (37) goes off.	Indicator does not go off.
			h. Wait for party to return your call; CALL/ALARM (4) sounds and DIGITAL 7 switch/indicator (37) flashes.	Alarm does not sound or indicator does not flash.
			i. Press the DIGITAL 7 switch/indicator (37); DIGITAL 7 switch/indicator (37) comes on continuously and CALL/ALARM (4) is silent.	Indicator does not come on continuously or CALL/ALARM sounds.
			j. Press the PTT pushbutton (12) and ask the party to hold.	
			k. Set DIGITAL 7 BRIDGE-TERMINATE/THROUGH switch (38) to BRIDGE.	
			l. Press the DIGITAL 8 switch/indicator (26); DIGITAL 7 switch/indicator (37) goes off and DIGITAL 8 switch/indicator (26) comes on.	DIGITAL 7 indicator does not go off or DIGITAL 8 indicator does not come on.
			m. Press the PTT pushbutton (12) and talk with the party. Tell them the test has been completed and ask them to clear the line.	You cannot speak to the party or hear the party.
			n. Press the DIGITAL 8 switch/indicator (26); DIGITAL 8 switch/indicator (26) goes off.	Indicator does not go off.
			o. Set the DIGITAL 7 BRIDGE-TERMINATE/THROUGH switch (38) to TERMINATE/THROUGH.	

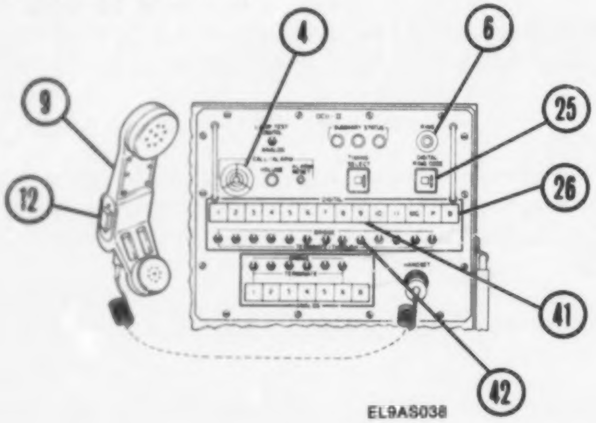
2-5. OPERATOR PMCS TABLE—Continued

Item No.	Interval W	Item to be Inspected	Procedures Check and Have Repaired or Adjusted as Necessary	For Readiness Reporting: Equipment is not Ready/Available IF:
17	●	DVOW Channel 8 (if used)	a. Pick up handset (9).  EL9AS037	
			b. Press the DIGITAL 8 switch/indicator (39); DIGITAL 8 switch/indicator (39) comes on.	Indicator does not come on.
			c. Listen to make sure the line is clear before proceeding with this test. If the line is not clear, press DIGITAL 8 switch/indicator (39) again; DIGITAL 8 switch/indicator (39) goes off. Wait until the line is clear, then repeat steps b. and c.	Indicator stays on.
			d. Set the DIGITAL RING CODE switch (25) to the number of a station on channel 8.	
			e. Momentarily press the RING pushbutton (6); called party answers.	Called party does not answer.
			f. Press the PTT pushbutton (12) and tell the party you are performing a line check, then ask them to return your call.	Party cannot hear you or you cannot hear party.

2-5. OPERATOR PMCS TABLE—Continued

Item No.	Interval W	Item to be Inspected	Procedures Check and Have Repaired or Adjusted as Necessary	For Readiness Reporting: Equipment is not Ready/Available IF:
17 (Cont)	●	DVOW Channel 8 (Cont)	g. Press the DIGITAL 8 switch/indicator (39); DIGITAL 8 switch/indicator (39) goes off.	Indicator does not go off.
			h. Wait for party to return your call; CALL/ALARM (4) sounds and DIGITAL 8 switch/indicator (39) flashes.	Alarm does not sound or indicator does not flash.
			i. Press the DIGITAL 8 switch/indicator (39); DIGITAL 8 switch/indicator (39) comes on continuously and CALL/ALARM (4) is silent.	Indicator does not come on continuously or CALL/ALARM sounds.
			j. Press the PTT pushbutton (12) and ask the party to hold.	
			k. Set DIGITAL 8 BRIDGE-TERMINATE/THROUGH switch (40) to BRIDGE.	
			l. Press the DIGITAL B switch/indicator (26); DIGITAL 8 switch/indicator (39) goes off and DIGITAL B switch/indicator (26) comes on.	DIGITAL 8 indicator does not go off or DIGITAL B indicator does not come on.
			m. Press the PTT pushbutton (12) and talk with the party. Tell them the test has been completed and ask them to clear the line.	You cannot speak to the party or hear the party.
			n. Press the DIGITAL B switch/indicator (26); DIGITAL B switch/indicator (26) goes off.	Indicator does not go off.
			o. Set the DIGITAL 8 BRIDGE-TERMINATE/THROUGH switch (40) to TERMINATE/THROUGH.	

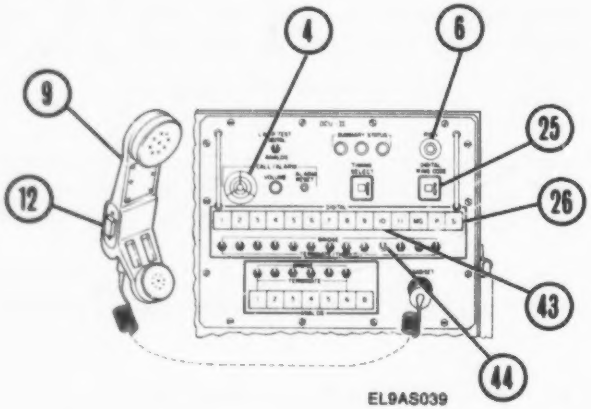
2-5. OPERATOR PMCS TABLE—Continued

Item No.	Interval W	Item to be Inspected	Procedures Check and Have Repaired or Adjusted as Necessary	For Readiness Reporting: Equipment is not Ready/Available IF:
18	●	DVOW Channel 9 (if used)	a. Pick up handset (9). 	
			b. Press the DIGITAL 9 switch/indicator (41); DIGITAL 9 switch/indicator (41) comes on.	Indicator does not come on.
			c. Listen to make sure the line is clear before proceeding with this test. If the line is not clear, press DIGITAL 9 switch/indicator (41) again; DIGITAL 9 switch/indicator (41) goes off. Wait until the line is clear, then repeat steps b. and c.	Indicator stays on.
			d. Set the DIGITAL RING CODE switch (25) to the number of a station on channel 9.	
			e. Momentarily press the RING pushbutton (6); called party answers.	Called party does not answer.
			f. Press the PTT pushbutton (12) and tell the party you are performing a line check, then ask them to return your call.	Party cannot hear you or you cannot hear party.

2-5. OPERATOR PMCS TABLE—Continued

Item No.	Interval W	Item to be Inspected	Procedures Check and Have Repaired or Adjusted as Necessary	For Readiness Reporting: Equipment is not Ready/Available IF:
18 (Cont)	●	DVOW Channel 9 (Cont)	g. Press the DIGITAL 9 switch/indicator (41); DIGITAL 9 switch/indicator (41) goes off.	Indicator does not go off.
			h. Wait for party to return your call; CALL/ALARM (4) sounds and DIGITAL 9 switch/indicator (41) flashes.	Alarm does not sound or indicator does not flash.
			i. Press the DIGITAL 9 switch/indicator (41); DIGITAL 9 switch/indicator (41) comes on continuously and CALL/ALARM (4) is silent.	Indicator does not come on continuously or CALL/ALARM sounds.
			j. Press the PTT pushbutton (12) and ask the party to hold.	
			k. Set DIGITAL 9 BRIDGE-TERMINATE/THROUGH switch (42) to BRIDGE.	
			l. Press the DIGITAL B switch/indicator (26); DIGITAL 9 switch/indicator (41) goes off and DIGITAL B switch/indicator (26) comes on.	DIGITAL 9 indicator does not go off or DIGITAL B indicator does not come on.
			m. Press the PTT pushbutton (12) and talk with the party. Tell them the test has been completed and ask them to clear the line.	You cannot speak to the party or hear the party.
			n. Press the DIGITAL B switch/indicator (26); DIGITAL B switch/indicator (26) goes off.	Indicator does not go off.
			o. Set the DIGITAL 9 BRIDGE-TERMINATE/THROUGH switch (42) to TERMINATE/THROUGH.	

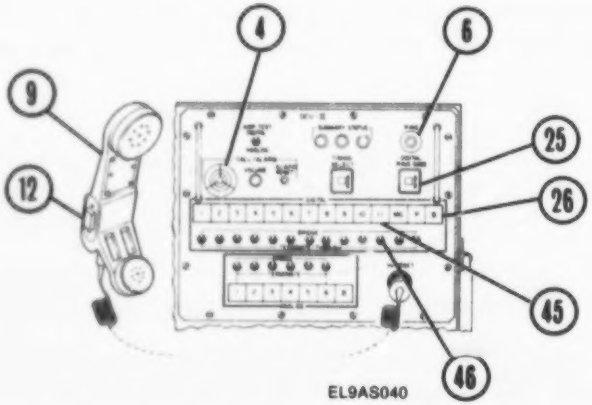
2-5. OPERATOR PMCS TABLE—Continued

Item No.	Interval W	Item to be Inspected	Procedures Check and Have Repaired or Adjusted as Necessary	For Readiness Reporting: Equipment is not Ready/Available IF:
19	●	DVOW Channel 10 (if used)	a. Pick up handset (9).  EL9AS039	
			b. Press the DIGITAL 10 switch/indicator (43); DIGITAL 10 switch/indicator (43) comes on.	Indicator does not come on.
			c. Listen to make sure the line is clear before proceeding with this test. If the line is not clear, press DIGITAL 10 switch/indicator (43) again; DIGITAL 10 switch/indicator (43) goes off. Wait until the line is clear, then repeat steps b. and c.	Indicator stays on.
			d. Set the DIGITAL RING CODE switch (25) to the number of a station on channel 10.	
			e. Momentarily press the RING pushbutton (6); called party answers.	Called party does not answer.
			f. Press the PTT pushbutton (12) and tell the party you are performing a line check, then ask them to return your call.	Party cannot hear you or you cannot hear party.

2-5. OPERATOR PMCS TABLE—Continued

Item No.	Interval W	Item to be Inspected	Procedures Check and Have Repaired or Adjusted as Necessary	For Readiness Reporting: Equipment is not Ready/Available IF:
19 (Cont)	●	DVOW Channel 10 (Cont)	g. Press the DIGITAL 10 switch/indicator (43); DIGITAL 10 switch/indicator (43) goes off.	Indicator does not go off.
			h. Wait for party to return your call; CALL/ALARM (4) sounds and DIGITAL 10 switch/indicator (43) flashes.	Alarm does not sound or indicator does not flash.
			i. Press the DIGITAL 10 switch/indicator (43); DIGITAL 10 switch/indicator (43) comes on continuously and CALL/ALARM (4) is silent.	Indicator does not come on continuously or CALL/ALARM sounds.
			j. Press the PTT pushbutton (12) and ask the party to hold.	
			k. Set DIGITAL 10 BRIDGE-TERMINATE/THROUGH switch (44) to BRIDGE.	
			l. Press the DIGITAL B switch/indicator (26); DIGITAL 10 switch/indicator (43) goes off and DIGITAL B switch/indicator (26) comes on.	DIGITAL 10 indicator does not go off or DIGITAL B indicator does not come on.
			m. Press the PTT pushbutton (12) and talk with the party. Tell them the test has been completed and ask them to clear the line.	You cannot speak to the party or hear the party.
			n. Press the DIGITAL B switch/indicator (26); DIGITAL B switch/indicator (26) goes off.	Indicator does not go off.
			o. Set the DIGITAL 10 BRIDGE-TERMINATE/THROUGH switch (44) to TERMINATE/THROUGH.	

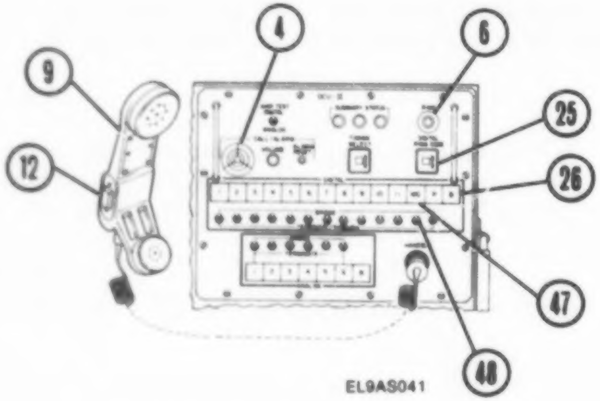
2-5. OPERATOR PMCS TABLE—Continued

Item No.	Interval W	Item to be Inspected	Procedures Check and Have Repaired or Adjusted as Necessary	For Readiness Reporting: Equipment is not Ready/Available IF:
20	●	DVOW Channel 11 (if used)	a. Pick up handset (9).  	
			b. Press the DIGITAL 11 switch/indicator (45); DIGITAL 11 switch/indicator (45) comes on.	Indicator does not come on.
			c. Listen to make sure the line is clear before proceeding with this test. If the line is not clear, press DIGITAL 11 switch/indicator (45) again; DIGITAL 11 switch/indicator (45) goes off. Wait until the line is clear, then repeat steps b. and c.	Indicator stays on.
			d. Set the DIGITAL RING CODE switch (25) to the number of a station on channel 11.	
			e. Momentarily press the RING pushbutton (6); called party answers.	Called party does not answer.
			f. Press the PTT pushbutton (12) and tell the party you are performing a line check, then ask them to return your call.	Party cannot hear you or you cannot hear party.

2-5. OPERATOR PMCS TABLE—Continued

Item No.	Interval W	Item to be Inspected	Procedures Check and Have Repaired or Adjusted as Necessary	For Readiness Reporting: Equipment is not Ready/Available IF:
20 (Cont)	●	DVOW Channel 11 (Cont)	g. Press the DIGITAL 11 switch/indicator (45); DIGITAL 11 switch/indicator (45) goes off.	Indicator does not go off.
			h. Wait for party to return your call; CALL/ALARM (4) sounds and DIGITAL 11 switch/indicator (45) flashes.	Alarm does not sound or indicator does not flash.
			i. Press the DIGITAL 11 switch/indicator (45); DIGITAL 11 switch/indicator (45) comes on continuously and CALL/ALARM (4) is silent.	Indicator does not come on continuously or CALL/ALARM sounds.
			j. Press the PTT pushbutton (12) and ask the party to hold.	
			k. Set DIGITAL 11 BRIDGE-TERMINATE/THROUGH switch (46) to BRIDGE.	
			l. Press the DIGITAL B switch/indicator (26); DIGITAL 11 switch/indicator (45) goes off and DIGITAL B switch/indicator (26) comes on.	DIGITAL 11 indicator does not go off or DIGITAL B indicator does not come on.
			m. Press the PTT pushbutton (12) and talk with the party. Tell them the test has been completed and ask them to clear the line.	You cannot speak to the party or hear the party.
			n. Press the DIGITAL B switch/indicator (26); DIGITAL B switch/indicator (26) goes off.	Indicator does not go off.
			o. Set the DIGITAL 11 BRIDGE-TERMINATE/THROUGH switch (46) to TERMINATE/THROUGH.	

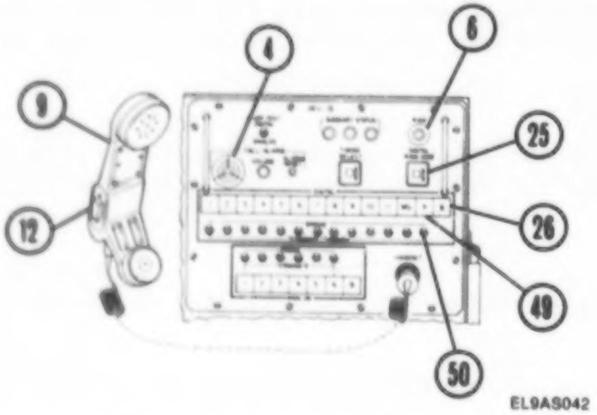
2-5. OPERATOR PMCS TABLE—Continued

Item No.	Interval W	Item to be Inspected	Procedures Check and Have Repaired or Adjusted as Necessary	For Readiness Reporting: Equipment is not Ready/Available IF:
21	●	DVOW Channel MG (if used)	a. Pick up handset (9). 	
			b. Press the DIGITAL MG switch/indicator (47); DIGITAL MG switch/indicator (47) comes on.	Indicator does not come on.
			c. Listen to make sure the line is clear before proceeding with this test. If the line is not clear, press DIGITAL MG switch/indicator (47) again; DIGITAL MG switch/indicator (47) goes off. Wait until the line is clear, then repeat steps b. and c.	Indicator stays on.
			d. Set the DIGITAL RING CODE switch (25) to the number of a station on channel MG.	
			e. Momentarily press the RING pushbutton (6); called party answers.	Called party does not answer.
			f. Press the PTT pushbutton (12) and tell the party you are performing a line check, then ask them to return your call.	Party cannot hear you or you cannot hear party.

2-5. OPERATOR PMCS TABLE—Continued

Item No.	Interval W	Item to be Inspected	Procedures Check and Have Repaired or Adjusted as Necessary	For Readiness Reporting: Equipment is not Ready/Available IF:
21 (Cont)	●	DVOW Channel MG (Cont)	g. Press the DIGITAL MG switch/indicator (47); DIGITAL MG switch/indicator (47) goes off.	Indicator does not go off.
			h. Wait for party to return your call; CALL/ALARM (4) sounds and DIGITAL MG switch/indicator (47) flashes.	Alarm does not sound or indicator does not flash.
			i. Press the DIGITAL MG switch/indicator (47); DIGITAL MG switch/indicator (47) comes on continuously and CALL/ALARM (4) is silent.	Indicator does not come on continuously or CALL/ALARM sounds.
			j. Press the PTT pushbutton (12) and ask the party to hold.	
			k. Set DIGITAL MG BRIDGE-TERMINATE/THROUGH switch (48) to BRIDGE.	
			l. Press the DIGITAL B switch/indicator (26); DIGITAL MG switch/indicator (47) goes off and DIGITAL B switch/indicator (26) comes on.	DIGITAL MG indicator does not go off or DIGITAL B indicator does not come on.
			m. Press the PTT pushbutton (12) and talk with the party. Tell them the test has been completed and ask them to clear the line.	You cannot speak to the party or hear the party.
			n. Press the DIGITAL B switch/indicator (26); DIGITAL B switch/indicator (26) goes off.	Indicator does not go off.
			o. Set the DIGITAL MG BRIDGE-TERMINATE/THROUGH switch (48) to TERMINATE/THROUGH.	

2-5. OPERATOR PMCS TABLE—Continued

Item No.	Interval W	Item to be Inspected	Procedures Check and Have Repaired or Adjusted as Necessary	For Readiness Reporting: Equipment is not Ready/Available IF:
22	●	DVOW Channel P (if used)	a. Pick up handset (9). 	
			b. Press the DIGITAL P switch/indicator (49); DIGITAL P switch/indicator (49) comes on.	Indicator does not come on.
			c. Listen to make sure the line is clear before proceeding with this test. If the line is not clear, press DIGITAL P switch/indicator (49) again; DIGITAL P switch/indicator (49) goes off. Wait until the line is clear, then repeat steps b. and c.	Indicator stays on.
			d. Set the DIGITAL RING CODE switch (25) to the number of a station on channel P.	
			e. Momentarily press the RING pushbutton (6); called party answers.	Called party does not answer.
			f. Press the PTT pushbutton (12) and tell the party you are performing a line check, then ask them to return your call.	Party cannot hear you or you cannot hear party.

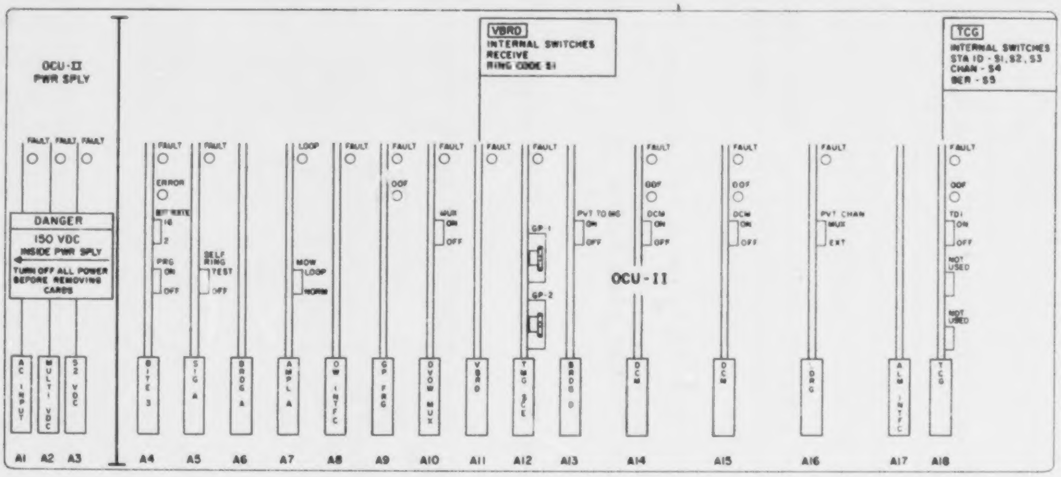
2-5. OPERATOR PMCS TABLE—Continued

Item No.	Interval W	Item to be Inspected	Procedures Check and Have Repaired or Adjusted as Necessary	For Readiness Reporting: Equipment is not Ready/Available IF:
22 (Cont)	●	DVOW Channel P (Cont)	g. Press the DIGITAL P switch/indicator (49); DIGITAL P switch/indicator (49) goes off.	Indicator does not go off.
			h. Wait for party to return your call; CALL/ALARM (4) sounds and DIGITAL P switch/indicator (49) flashes.	Alarm does not sound or indicator does not flash.
			i. Press the DIGITAL P switch/indicator (49); DIGITAL MG switch/indicator (49) comes on continuously and CALL/ALARM (4) is silent.	Indicator does not come on continuously or CALL/ALARM sounds.
			j. Press the PTT pushbutton (12) and ask the party to hold.	
			k. Set DIGITAL P BRIDGE-TERMINATE/THROUGH switch (50) to BRIDGE.	
			l. Press the DIGITAL B switch/indicator (26); DIGITAL P switch/indicator (49) goes off and DIGITAL B switch/indicator (26) comes on.	DIGITAL P indicator does not go off or DIGITAL B indicator does not come on.
			m. Press the PTT pushbutton (12) and talk with the party. Tell them the test has been completed and ask them to clear the line.	You cannot speak to the party or hear the party.
			n. Press the DIGITAL B switch/indicator (26); DIGITAL B switch/indicator (26) goes off.	Indicator does not go off.
			o. Set the DIGITAL P BRIDGE-TERMINATE/THROUGH switch (50) to TERMINATE/THROUGH.	

Section III. OPERATION UNDER USUAL CONDITIONS

2-6. RESETTING CCA SWITCHES

After initial installation and operation of the OCU-II, changes in system use may require resetting switches on the OCU-II. If CCA switches must be reset, refer to the following table for switch setting data. Changes of system use will be directed by personnel at the system control point. Refer to label on front cover of OCU-II.


OCU-II
PWR SPLY
FAULT
DANGER
150 VDC
INSIDE PWR SPLY
TURN OFF ALL POWER BEFORE REMOVING CARDS
AC INPUT
MULTI VDC
52 VDC
A1
A2
A3
ERROR
BIT RATE
16
2
PRG
ON
OFF
SELF RING
TEST
LOOP
MOW
NORM
OOF
MUX
GP-1
GP-2
PVT TO MG
DCM
PVT CHAN
EXT
TDI
NOT USED
BITE 3
SIG A
BRDG A
AMPL A
OW INTFC
GP PRG
DVOW MUX
VBRD
TMG SCE
BRDG D
DCM
DRG
ALM INTFC
TCG
A4
A5
A6
A7
A8
A9
A10
A11
A12
A13
A14
A15
A16
A17
A18
OCU-II
VBRD
INTERNAL SWITCHES
RECEIVE
RING CODE S1
TCG
INTERNAL SWITCHES
STA ID - S1, S2, S3
CHAN - S4
BER - S5

EL9AS043

Switch Name	Function
BIT RATE	Selects the required bit rate for the pseudo random generator test circuits.

Position	Setting Data
2	Set to this position when 2 kb/s bit rate is required for pseudo random generator test circuits.
16	Set to this position when 16 kb/s bit rate is required for pseudo random generator test circuits.

2-6. RESETTING CCA SWITCHES—Continued

Switch Name	Function
PRG	Turns the pseudo random generator ON or OFF.

Position	Setting Data
ON	Starts the pseudo random generator; also enables the ERROR LED.
OFF	Turns off pseudo random generator, inhibits the ERROR LED.

SELF RING	Used to test the AVOW ring circuits of the OCU-II.

Position	Setting Data
TEST	Set to this position the SIG A CCA generates a test ring signal to check the AVOW circuits of OCU-II.
OFF	Set to this position, no test ring signal is being generated.

MOW	Selects whether the MOW is operating normally or in a loop back mode.

Position	Setting Data
NORM	Set to this position for normal transmission flow through the OCU-II.
LOOP	Set to this position if loop back checks are to be performed on the OCU-II MOW (also lights error LED).

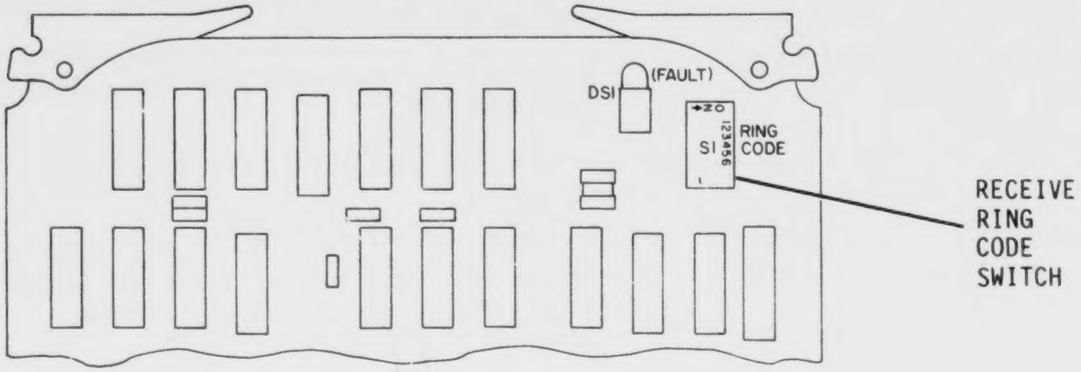
MUX ON/OFF	Selects the desired operation of the DVOW multiplexer.

Position	Setting Data
ON	Turns the DVOW multiplexer on for normal operation.
OFF	Turns the DVOW multiplexer off when it is not needed.

best copy available

2-6. RESETTING CCA SWITCHES—Continued

Switch Name	Function
RECEIVE RING CODE	Selects the receive ring code which the OCU-II will decode and accept.



EL9AS044

VBRD

Position						Setting Data
1	2	3	4	5	6	Digital Ring Code
OFF	OFF	OFF	OFF	OFF	ON	1
OFF	OFF	OFF	OFF	ON	OFF	2
OFF	OFF	OFF	ON	OFF	OFF	3
OFF	OFF	ON	OFF	OFF	OFF	4
OFF	OFF	OFF	ON	ON	ON	5
OFF	OFF	ON	ON	ON	OFF	6
OFF	ON	ON	ON	OFF	OFF	7
ON	ON	ON	OFF	OFF	OFF	8
ON	ON	OFF	OFF	OFF	ON	9
ON	OFF	ON	OFF	OFF	ON	10
ON	ON	OFF	ON	OFF	OFF	11
ON	ON	OFF	OFF	ON	OFF	12
OFF	ON	ON	ON	ON	ON	13
ON	OFF	ON	ON	ON	ON	14
ON	ON	OFF	ON	ON	ON	15
ON	ON	ON	OFF	ON	ON	16

2-6. RESETTING CCA SWITCHES—Continued

Switch Name	Function
GP-1	Selects the required timing rates for the group 1 input and output.

Position	Setting Data	
	GP-1 Input	GP-1 Output
2	128	128
3	144	144
4	256	256
5	288	288
6	512	512
7	576	576
8	1024	1024
9	1152	1152
10	1536	-
11	2048	-
12	2304	2034
13	4096	-
14	4608	4608

Switch Name	Function
GP-2	Selects the required timing rates for the Group 2 output.

Position	Setting Data
2	128
3	144
4	256
5	288
6	512
7	576
8	1024
9	1152
10	-
11	-
12	2304
13	-
14	4608

2-6. RESETTING CCA SWITCHES—Continued

Switch Name	Function
PVT CHAN MUX/EXT	Selects the desired operation of the 12th group orderwire.

Position	Setting Data
MUX	Set to this position when the 12th group orderwire is to be multiplexed into the DVOW group.
EXT.	Set to this position when the 12th group orderwire is to be one of the external orderwire channels.

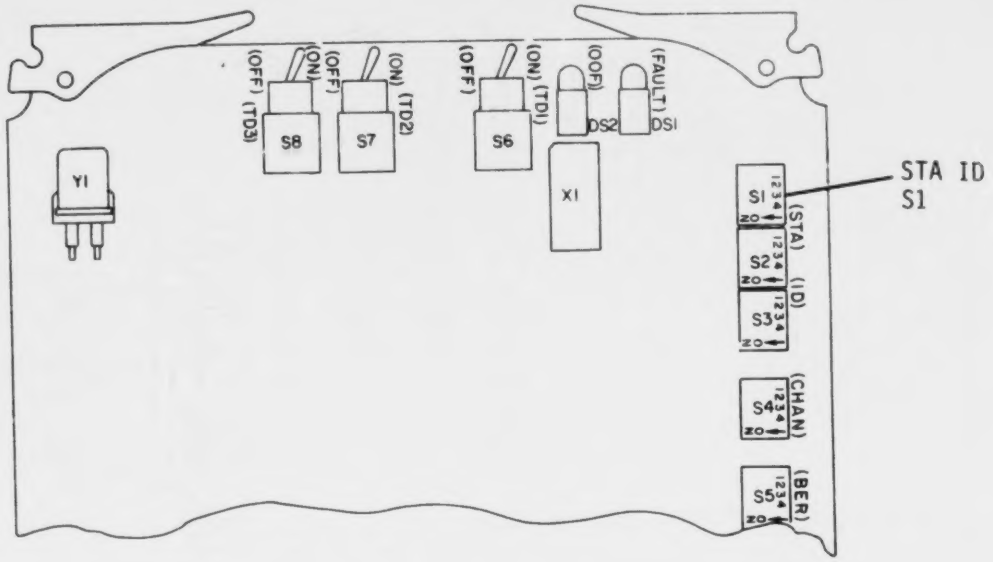
Switch Name	Function
PVT TO MG ON/OFF	Selects either normal or special hookup of master group orderwire.

Position	Setting Data
ON	Connects the incoming 12th group orderwire to the outgoing master group. Also connects the incoming master group to the outgoing master group.
OFF	The 12th group orderwire and the master group work normally (TERMINATED).

Switch Name	Function
DCM ON/OFF	Selects the desired operation of the data channel multiplexer.

Position	Setting Data
ON	Turns the data channel multiplexer ON for normal operation.
OFF	Turns the data channel multiplexer OFF when it is not needed.

2-6. RESETTING CCA SWITCHES—Continued


(OFF) (TD3)
(ON)
S8
(OFF)
(ON) (TD2)
S7
(OFF)
(ON) (TD1)
S6
(OOF)
DS2
(FAULT)
DS1
Y1
X1
S1
S2
S3
S4
S5
1234
ON
(STA)
(ID)
(CHAN)
(BER)
STA ID
S1

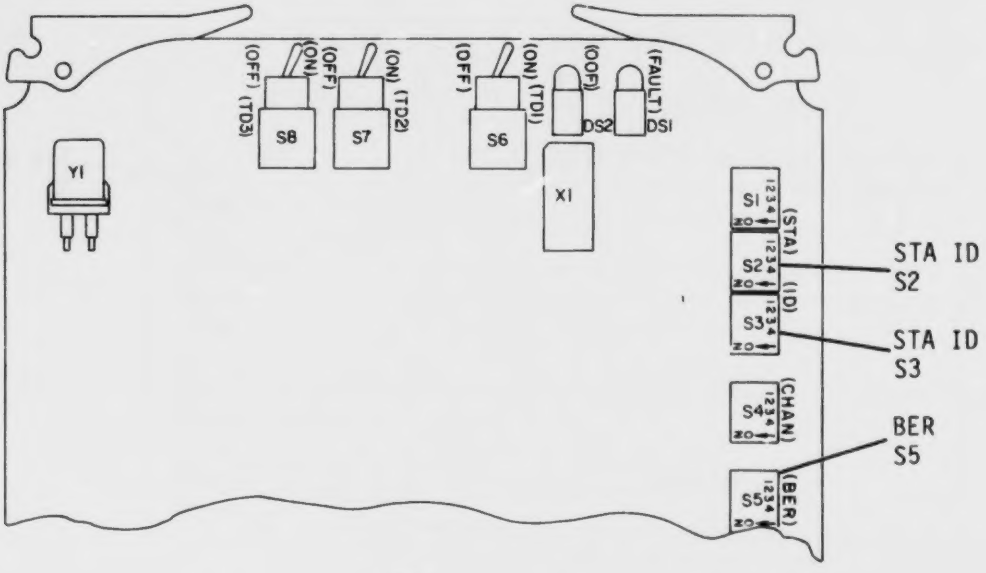
TCG

EL9AS045

Switch Name	Function
STA ID (S1)	Select the alpha station ID code.

Position 1	2	3	4	Setting Data Station ID Alpha
ON	ON	ON	ON	A
ON	ON	ON	OFF	B
ON	ON	OFF	ON	C
ON	ON	OFF	OFF	D
ON	OFF	ON	ON	E
ON	OFF	ON	OFF	F
ON	OFF	OFF	ON	G
ON	OFF	OFF	OFF	H
OFF	ON	ON	ON	L
OFF	ON	ON	OFF	M
OFF	ON	OFF	ON	P
OFF	ON	OFF	OFF	R
OFF	OFF	ON	ON	S
OFF	OFF	ON	OFF	T
OFF	OFF	OFF	ON	X
OFF	OFF	OFF	OFF	Z

2-6. RESETTING CCA SWITCHES—Continued


(OFF) (TD3)
(ON)
(OFF)
(ON) (TD2)
(OFF)
(ON) (TD1)
(OOF)
(FAULT)
S8
S7
S6
DS2
DS1
Y1
X1
S1
S2
S3
S4
S5
1234
ON
(STA)
(ID)
(CHAN)
(BER)
STA ID S2
STA ID S3
BER S5

TCG

EL9AS046

Switch Name	Function
STA ID (S2)	Selects the required numeric 1 for station ID.

Position				Setting Data
1	2	3	4	Station ID Numeric 1
ON	ON	ON	ON	0
ON	ON	ON	OFF	1
ON	ON	OFF	ON	2
ON	ON	OFF	OFF	3
ON	OFF	ON	ON	4
ON	OFF	ON	OFF	5
ON	OFF	OFF	ON	6
ON	OFF	OFF	OFF	7
OFF	ON	ON	ON	8
OFF	ON	ON	OFF	9

2-6. RESETTING CCA SWITCHES--Continued

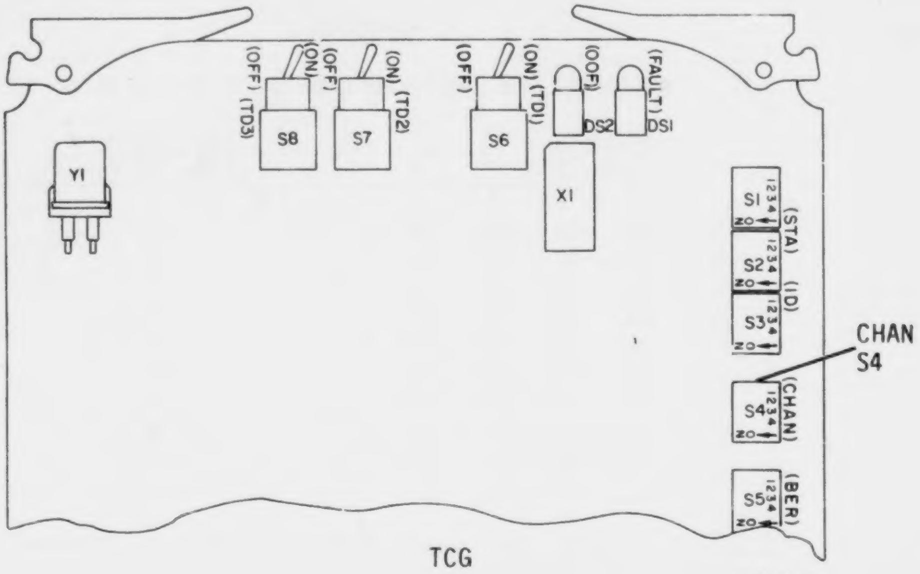
Switch Name	Function
STA ID (S3)	Selects the required numeric 2 for station ID.

Position				Setting Data
1	2	3	4	Station ID Numeric 2
ON	ON	ON	ON	0
ON	ON	OFF	ON	2
ON	ON	OFF	OFF	3
ON	OFF	ON	ON	4
ON	OFF	ON	OFF	5
ON	OFF	OFF	ON	6
ON	OFF	OFF	OFF	7
OFF	ON	ON	ON	8
OFF	ON	ON	OFF	9

Switch Name	Function
BER (S5)	Selects the required BITE error rate threshold reference number.

Position				Setting Data
1	2	3	4	Station ID Numeric 1
ON	ON	ON	ON	0
ON	ON	ON	OFF	1
ON	ON	OFF	ON	2
ON	ON	OFF	OFF	3
ON	OFF	ON	ON	4
ON	OFF	ON	OFF	5
ON	OFF	OFF	ON	6
ON	OFF	OFF	OFF	7
OFF	ON	ON	ON	8
OFF	ON	ON	OFF	9

2-6. RESETTING CCA SWITCHES—Continued


(OFF) (TD3)
(ON)
S8
(OFF)
(ON) (TD2)
S7
(OFF)
(ON) (TD1)
S6
(OOF)
DS2
(FAULT)
DS1
Y1
X1
S1
(STA)
S2
(ID)
S3
CHAN
S4
S4
(CHAN)
S5
(BER)
1234
NO

TCG

EL9AS047

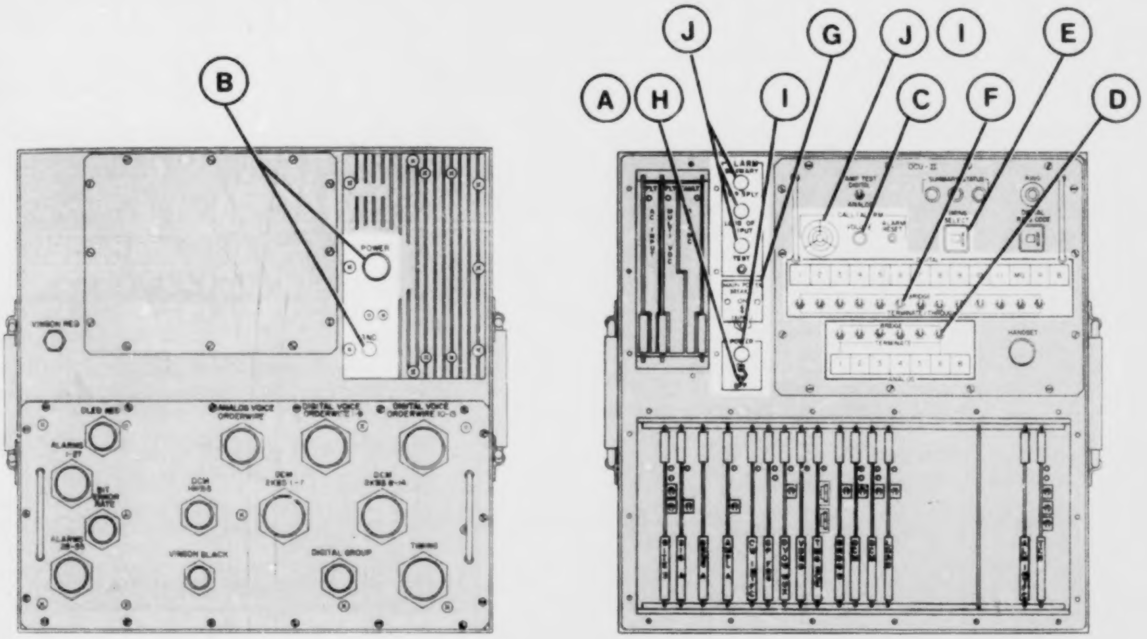
Switch Name	Function
CHAN (S4)	Selects the required telemetry combiner sub-channel for local DOW data.

Position 1	2	3	4	Setting Data Sub-channel Select
ON	ON	ON	OFF	1
ON	ON	OFF	ON	2
ON	ON	OFF	OFF	3
ON	OFF	ON	ON	4
ON	OFF	ON	OFF	5
ON	OFF	OFF	ON	6
ON	OFF	OFF	OFF	7
OFF	ON	ON	ON	8
OFF	ON	ON	OFF	9
OFF	ON	OFF	ON	10
OFF	ON	OFF	OFF	11
OFF	OFF	ON	ON	12
OFF	OFF	ON	OFF	13

TD1 — Selects the required telemetry decombiner function.

Position	Setting Data
ON	Turns No. 1 telemetry decombiner circuits on.
OFF	Turns No. 1 telemetry decombiner circuits off.

2-7. EQUIPMENT TURNON


B
POWER
GND
VINSON RED
ANALOG VOICE ORDERWIRE
DIGITAL VOICE ORDERWIRE 1-9
DIGITAL VOICE ORDERWIRE 10-15
ALARMS 1-27
BIT ERROR RATE
DCM 2KBS 1-7
DCM 2KBS 8-14
VINSON BLACK
DIGITAL GROUP
TIMING
J
G
J
I
E
A
H
I
C
F
D
OCU-II
HANDSET

EL9AS048

Ⓐ Insure POWER ON/OFF switch is OFF.

Ⓑ Insure power cable is connected, and OCU-II is grounded.

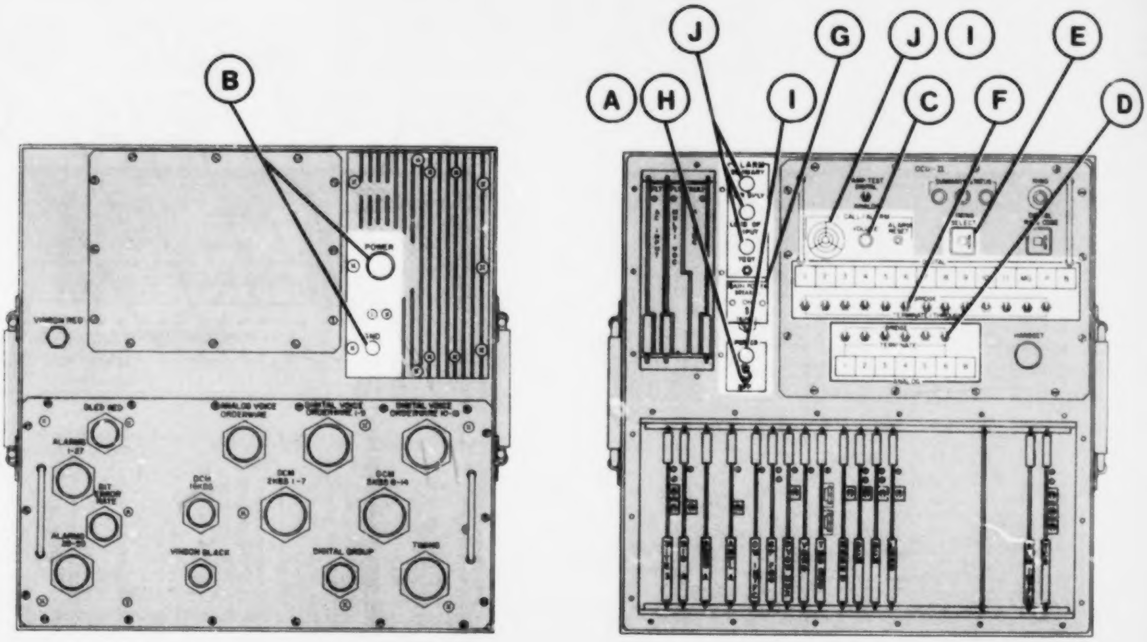
Ⓒ Set VOLUME control halfway between MIN and MAX.

Ⓓ Set all ANALOG BRIDGE/TERMINATE switches to TERMINATE.

Ⓔ Set TIMING SELECT switch to the position required by system documentation.

Ⓕ Set all DIGITAL BRIDGE-TERMINATE/THROUGH switches to TERMINATE/THROUGH.

2-7. EQUIPMENT TURNON—Continued


B
POWER
GND
VINSON RED
ALARMS 1-27
BIT ERROR RATE
ALARMS 28-50
VINSON BLACK
DIGITAL GROUP
TIMING
J
G
J
I
E
A
H
I
C
F
D
HANDSET

EL9AS048

G Insure MAIN POWER BREAKER is ON.

H Set POWER ON/OFF switch to ON.

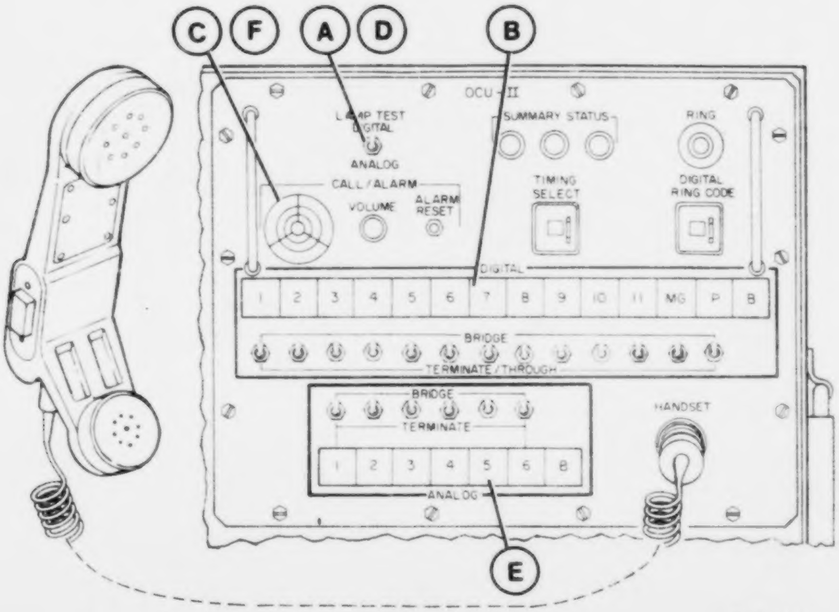
I POWER lamp lights, and audible alarm sounds.

J After 5-second warmup, these ALARM lamps and audible alarm should be off. If not, see Chapter 4, Section IV, Troubleshooting.

2-8. OPERATOR CHECKS

The following checks should be performed: a lamp test, a handset test, BITE test, and AVOW and DVOW line checks.

LAMP TEST


Ⓒ
Ⓕ
Ⓐ
Ⓓ
Ⓑ
OCU-II
LAMP TEST
DIGITAL
ANALOG
SUMMARY STATUS
RING
CALL/ALARM
VOLUME
ALARM RESET
TIMING SELECT
DIGITAL RING CODE
DIGITAL
1 2 3 4 5 6 7 8 9 10 11 MG P B
BRIDGE
TERMINATE/THROUGH
BRIDGE
TERMINATE
1 2 3 4 5 6 8
ANALOG
HANDSET
Ⓔ

EL9AS049

Ⓐ Momentarily set LAMP TEST switch to DIGITAL.

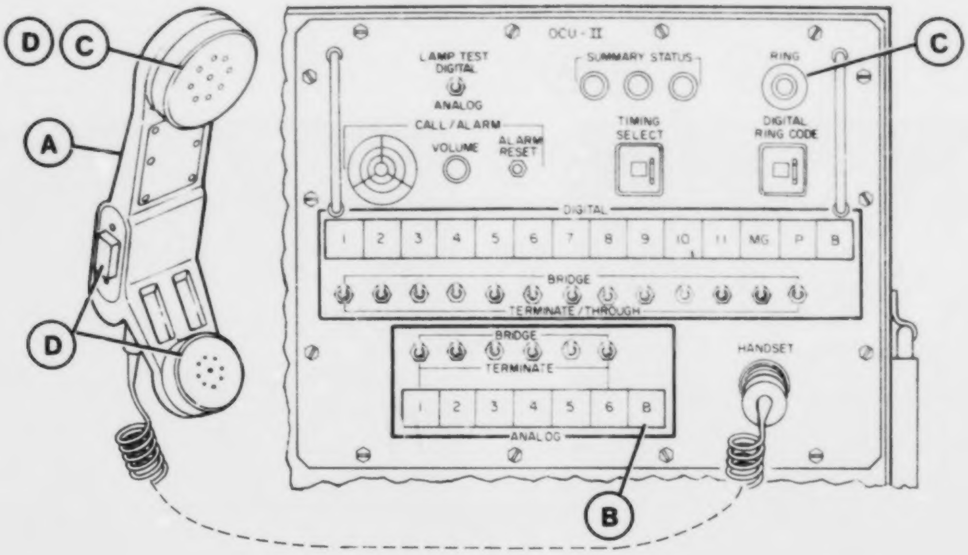
Ⓑ Ⓒ Observe that all DIGITAL switch/indicators come on, and CALL/ALARM sounds. Note any switch/indicator that is out, or dimmer than the others.

Ⓓ Momentarily set LAMP TEST switch to ANALOG.

Ⓔ Ⓕ Observe that all ANALOG switch/indicators come on, and CALL/ALARM sounds. Note any switch/indicator that is out, or dimmer than the others.

2-8. OPERATOR CHECKS—Continued

HANDSET TEST


D
C
A
D
OCU-II
LAMP TEST
DIGITAL
ANALOG
SUMMARY STATUS
RING
C
CALL/ALARM
VOLUME
ALARM RESET
TIMING SELECT
DIGITAL RING CODE
DIGITAL
1
2
3
4
5
6
7
8
9
10
11
MG
P
B
BRIDGE
TERMINATE/THROUGH
BRIDGE
TERMINATE
1
2
3
4
5
6
B
ANALOG
HANDSET
B

EL9AS050

Ⓐ Pick up handset.

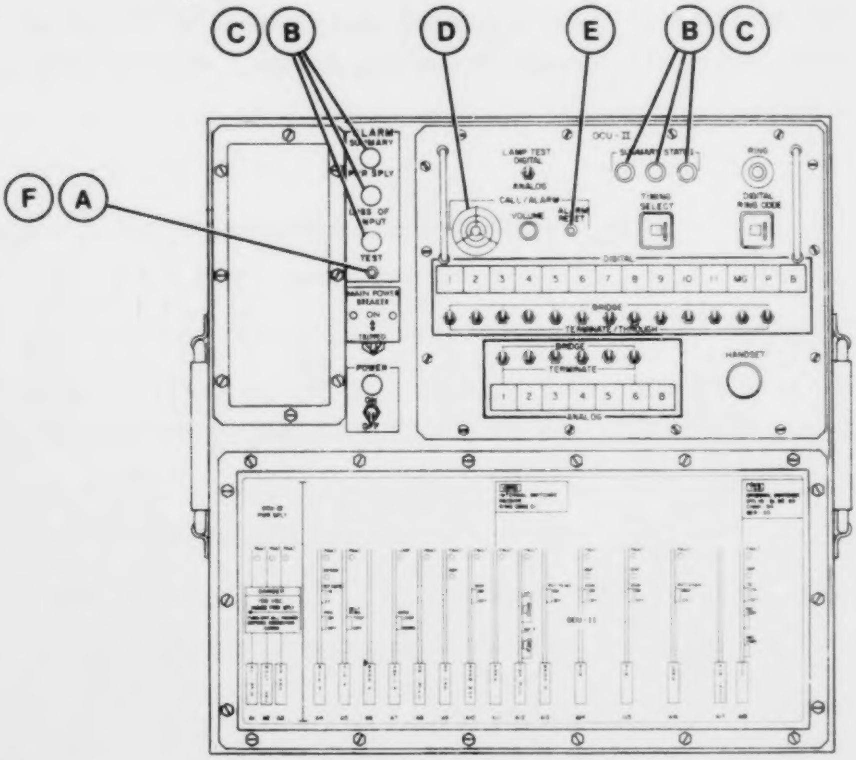
Ⓑ Press ANALOG B switch/indicator.

Ⓒ Press RING pushbutton and observe that ring tone is audible on handset receiver.

Ⓓ Press PTT switch and talk into microphone, and observe that your voice is audible in receiver as a low level side tone.

2-8. OPERATOR CHECKS—Continued

BITE TEST


C
B
D
E
B
C
F
A
ALARM
SUMMARY
PWR SPLY
LOSS OF INPUT
TEST
MAIN POWER BREAKER
ON
TRIPPED
POWER
ON
OFF
DCU - II
LAMP TEST
DIGITAL
ANALOG
CALL / ALARM
VOLUME
ALARM RESET
SUMMARY STATUS
RING
TIMING SELECT
DIGITAL RING CODE
DIGITAL
1
2
3
4
5
6
7
8
9
10
11
MG
P
B
BRIDGE
TERMINATE / THROUGH
HANDSET
BRIDGE
TERMINATE
1
2
3
4
5
6
8
ANALOG
DCU - II

EL9AS051

Ⓐ Press ALARM TEST pushbutton.

Ⓑ Lamps should light.

Ⓒ Any lamps that fail to light must be replaced (see paragraph 4-13).

Ⓓ Buzzer sounds.

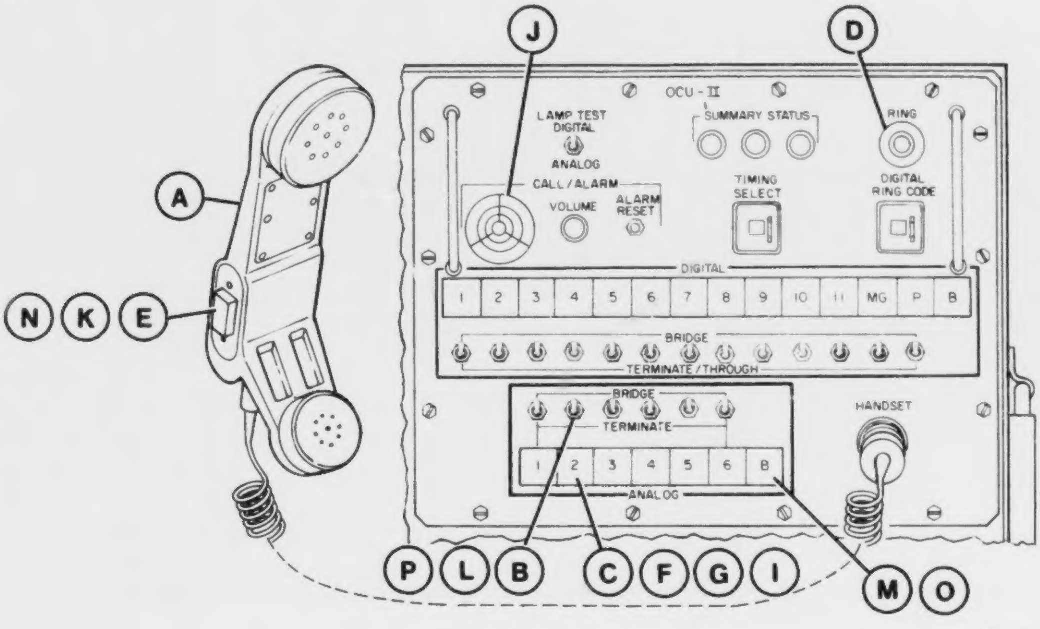
Ⓔ Press ALARM RESET pushbutton and observe that audible alarm stops.

Ⓕ Release ALARM TEST pushbutton.

2-8. OPERATOR CHECKS—Continued

AVOW LINE CHECK

AVOW line check consists of calling another party on one of the AVOWs, then having that party return your call through the analog bridge. Perform AVOW line check as follows:


J
D
OCU - II
LAMP TEST
DIGITAL
ANALOG
SUMMARY STATUS
RING
CALL / ALARM
VOLUME
ALARM RESET
TIMING SELECT
DIGITAL RING CODE
A
N
K
E
DIGITAL
1
2
3
4
5
6
7
8
9
10
11
MG
P
B
BRIDGE
TERMINATE / THROUGH
BRIDGE
TERMINATE
HANDSET
1
2
3
4
5
6
B
ANALOG
P
L
B
C
F
G
I
M
O

EL9AS052

Ⓐ Pick up handset.

Ⓑ Select an AVOW line that is connected to one of the other stations. Set ANALOG BRIDGE/TERMINATE switch for that line to TERMINATE.

Ⓒ Press ANALOG switch/indicator of the selected line and observe that switch/indicator of the selected line comes on.

Ⓓ Press RING pushbutton to alert the party at the station you are calling.

Ⓔ When the party answers, press PTT and tell them you are performing a line check, and ask them to return your call.

Ⓕ Press ANALOG switch/indicator of the line you called and observe that indicator goes off.

2-8. OPERATOR CHECKS—Continued

Ⓖ Wait for the party to return your call. Observe that ANALOG switch/indicator flashes.

Ⓗ CALL/ALARM sounds.

Ⓘ Press flashing ANALOG switch/indicator. Observe that switch/indicator comes on continuously.

Ⓙ CALL/ALARM silent.

Ⓚ Press PTT and ask the party to hold.

Ⓛ Set ANALOG BRIDGE/TERMINATE switch of the calling party to BRIDGE.

Ⓜ Press ANALOG B switch/indicator. Observe that ANALOG B switch/indicator comes on and ANALOG switch/indicator of the calling party goes off.

Ⓝ Press PTT and tell the calling party that the test has been completed and ask them to hang up.

Ⓞ Press ANALOG B switch/indicator and observe that it goes off.

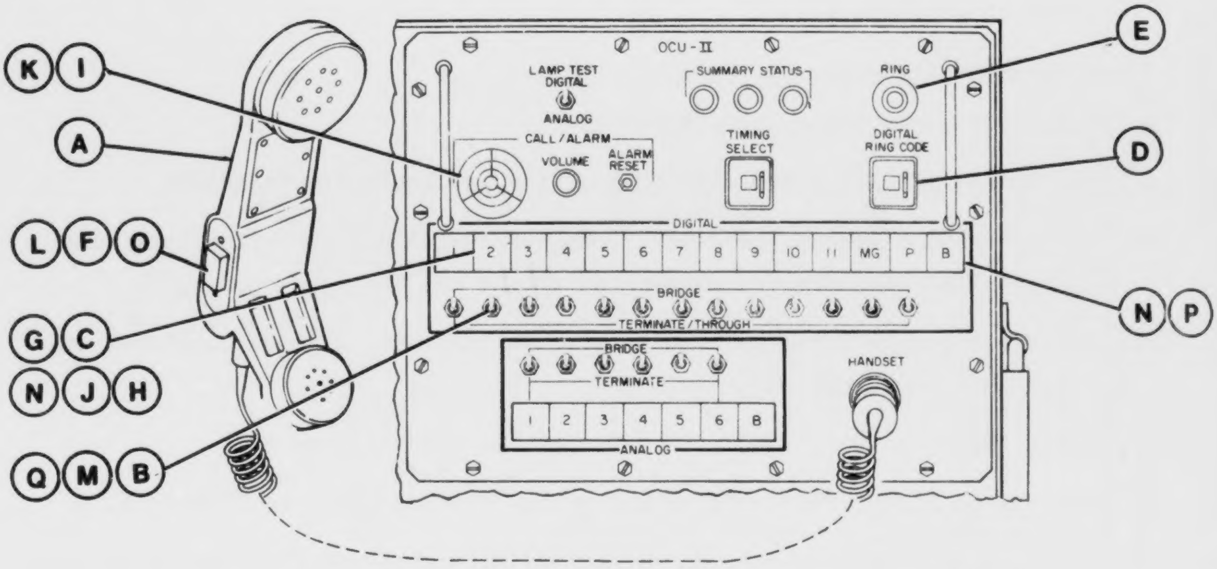
Ⓟ Set ANALOG BRIDGE/TERMINATE switch of the calling party to TERMINATE.

Ⓠ Repeat steps Ⓑ through Ⓟ for all AVOW channels that are in service.

2-8. OPERATOR CHECKS—Continued

DVOW LINE CHECK

The DVOW line check consists of calling another party on one of the DVOWs, then having that party return your call through the digital bridge. Perform DVOW line check as follows:


K I
A
L F O
G C
N J H
Q M B
E
D
N P
OCU-II
LAMP TEST
DIGITAL
ANALOG
CALL/ALARM
VOLUME
ALARM RESET
SUMMARY STATUS
TIMING SELECT
RING
DIGITAL RING CODE
DIGITAL
1 2 3 4 5 6 7 8 9 10 11 MG P B
BRIDGE
TERMINATE/THROUGH
BRIDGE
TERMINATE
1 2 3 4 5 6 B
ANALOG
HANDSET

EL9AS053

Ⓐ Pick up handset.

Ⓑ Select DVOW line that is connected to one of the other stations.

Ⓒ Press DIGITAL switch/indicator of the selected line and observe that switch/indicator comes on.

Ⓓ Set DIGITAL RING CODE switch to a valid number for a station on the selected DVOW line.

Ⓔ Press RING pushbutton to alert the party at the station you are calling.

Ⓕ When the party answers, press PTT switch and tell them you are performing a line check. Ask them to return your call.

2-8. OPERATOR CHECKS—Continued

Ⓖ Press DIGITAL switch/indicator of line you called, and observe that indicator goes off.

Ⓗ Wait for the party to return your call. Observe that DIGITAL switch/indicator flashes.

Ⓘ CALL/ALARM sounds.

Ⓙ Press flashing switch/indicator. Observe that switch/indicator comes on continuously.

Ⓚ CALL/ALARM silent.

Ⓛ Press PTT switch and ask the party to hold.

Ⓜ Set DIGITAL BRIDGE-TERMINATE/THROUGH switch to BRIDGE.

Ⓝ Press DIGITAL B switch/indicator. Observe that DIGITAL B switch/indicator is on and DIGITAL switch/indicator of the calling party goes off.

Ⓞ Press PTT switch and tell the calling party that test has been completed and ask for the channel to be cleared.

Ⓟ Press DIGITAL B switch/indicator and observe that it goes off.

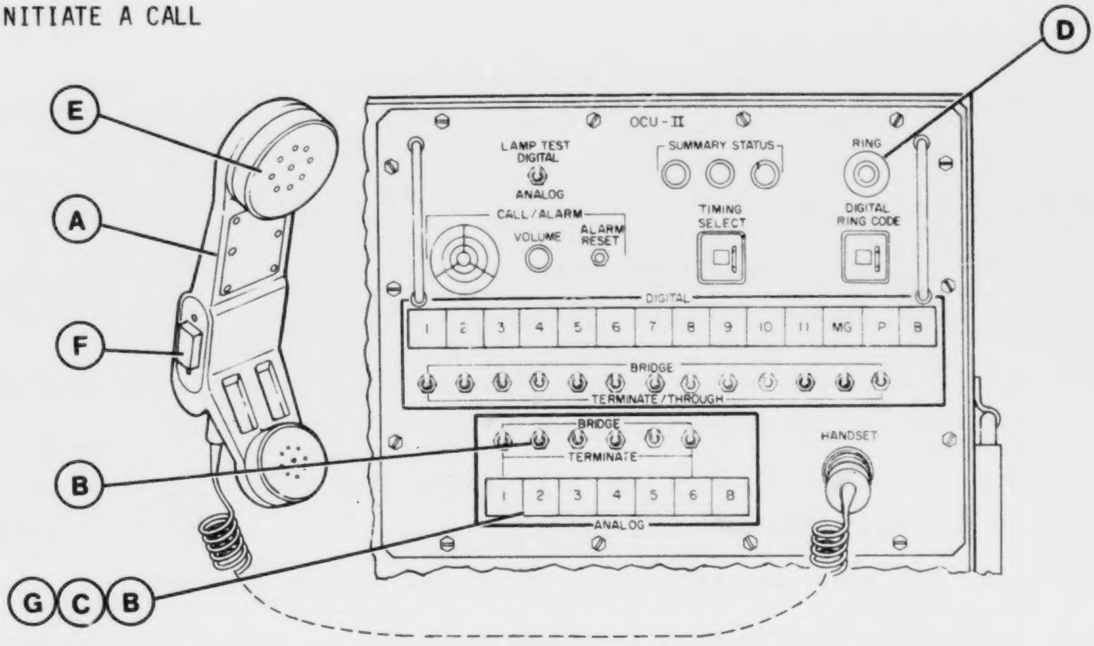
Ⓠ Set DIGITAL BRIDGE-TERMINATE/THROUGH switch of the calling party to its original position.

Ⓡ Repeat steps Ⓑ through Ⓠ for all DVOW channels that are in service.

2-9. AVOW OPERATION

In the AVOW mode of operation you can initiate a call, receive a call, bridge two to six channels, or answer a recall. The handset is automatically connected to AVOWs in this mode, and the handset PTT switch is required.

INITIATE A CALL


D
E
OCU-II
LAMP TEST
DIGITAL
ANALOG
SUMMARY STATUS
RING
A
CALL/ALARM
VOLUME
ALARM RESET
TIMING SELECT
DIGITAL RING CODE
F
DIGITAL
1
2
3
4
5
6
7
8
9
10
11
MG
P
B
BRIDGE
TERMINATE/THROUGH
BRIDGE
TERMINATE
HANDSET
B
1
2
3
4
5
6
8
ANALOG
G
C
B

EL9AS054

Ⓐ Pick up handset.

Ⓑ Select orderwire channel you want to call.

Ⓒ Press ANALOG switch/indicator for selected channel and observe that it comes on.

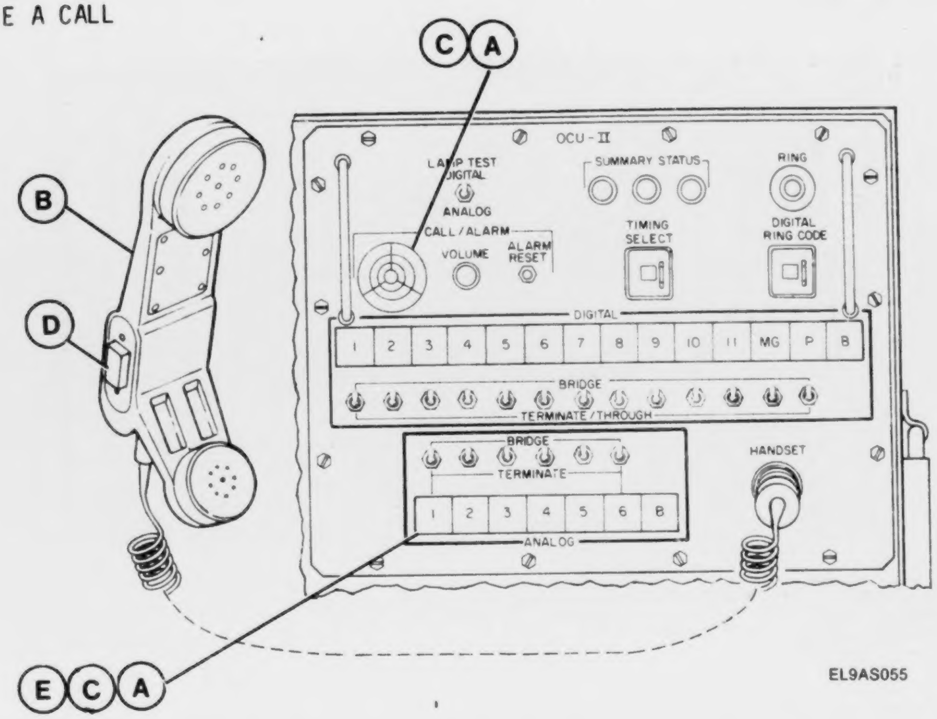
Ⓓ Momentarily press RING pushbutton to alert the called party. Observe that a ring tone is audible for about 2 seconds on handset receiver.

ⒺⒻ Listen for the called party to answer, press the PTT pushbutton and proceed with the conversation.

Ⓖ When you have completed the conversation, press ANALOG switch/indicator that is on and observe that it goes off.

2-9. AVOW OPERATION—Continued

RECEIVE A CALL


C
A
B
D
OCU-II
LAMP TEST
DIGITAL
ANALOG
CALL/ALARM
VOLUME
ALARM RESET
SUMMARY STATUS
RING
TIMING SELECT
DIGITAL RING CODE
DIGITAL
1 2 3 4 5 6 7 8 9 10 11 MG P B
BRIDGE
TERMINATE/THROUGH
BRIDGE
TERMINATE
1 2 3 4 5 6 B
ANALOG
HANDSET
E
C
A
EL9AS055

Ⓐ The sounding CALL/ALARM and flashing ANALOG switch/indicator alert you to an incoming AVOW call.

Ⓑ Pick up handset.

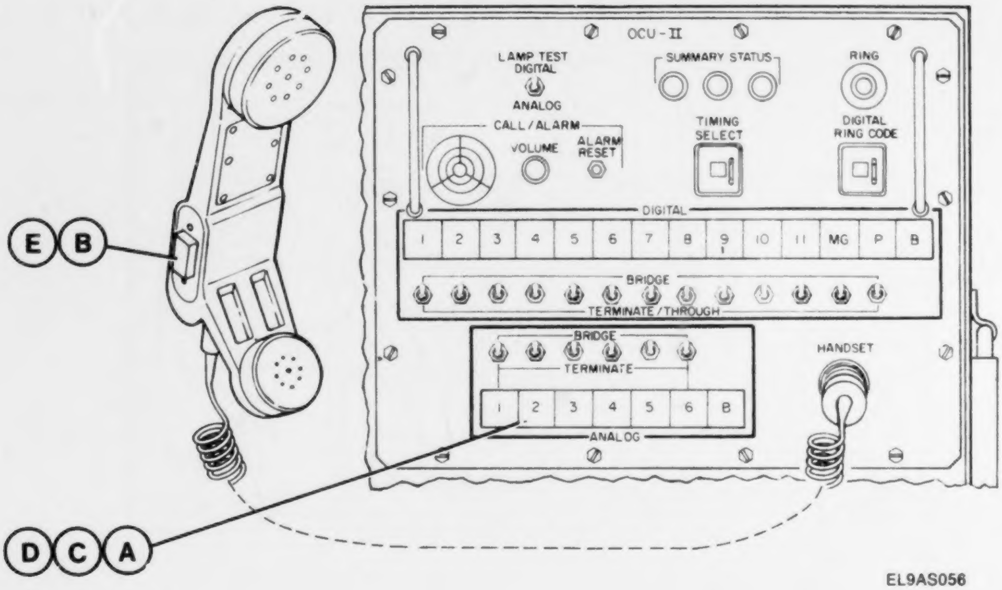
Ⓒ Press flashing ANALOG switch/indicator, and observe that CALL/ALARM is silent and ANALOG switch/indicator comes on continuously.

Ⓓ Answer the calling party by pressing PTT button and talking.

Ⓔ When you have completed your conversation, press ANALOG switch/indicator that is on and observe that it goes off.

2-9. AVOW OPERATION—Continued

PLACE A PARTY ON HOLD


OCU - II
LAMP TEST
DIGITAL
ANALOG
SUMMARY STATUS
RING
CALL / ALARM
VOLUME
ALARM RESET
TIMING SELECT
DIGITAL RING CODE
DIGITAL
1 2 3 4 5 6 7 8 9 10 11 MG P B
BRIDGE
TERMINATE / THROUGH
BRIDGE
TERMINATE
1 2 3 4 5 6 B
ANALOG
HANDSET
E B
D C A

EL9AS056

Ⓐ An ANALOG switch/indicator that is on displays the channel you are connected to.

Ⓑ Press the PTT pushbutton and tell the party on the channel to hold.

Ⓒ Press ANALOG switch/indicator and observe that it goes off. You are now free to initiate and receive calls on any other channel or join the bridge.

NOTE

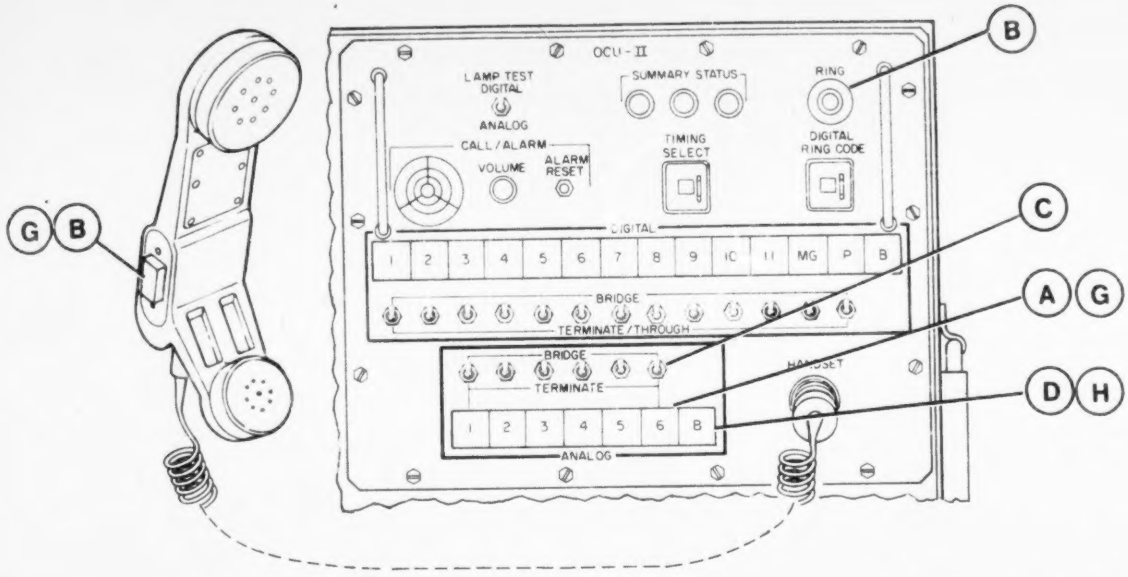
The ANALOG switch/indicators do not indicate that a party is holding. You must remember their orderwire number to reconnect your call.

Ⓓ When you are ready to talk with a party on hold, press the ANALOG switch/ indicator for their channel and observe that it comes on.

Ⓔ Press the PTT pushbutton and resume your conversation. If the other party does not respond, press RING pushbutton to alert them that you are back on the line.

2-9. AVOW OPERATION—Continued

CONNECT A CHANNEL TO THE BRIDGE


Ⓑ
OCU-II
LAMP TEST
DIGITAL
ANALOG
SUMMARY STATUS
RING
CALL/ALARM
VOLUME
ALARM RESET
TIMING SELECT
DIGITAL RING CODE
Ⓖ Ⓑ
DIGITAL
1 2 3 4 5 6 7 8 9 10 11 MG P B
Ⓒ
BRIDGE
TERMINATE/THROUGH
Ⓐ Ⓖ
BRIDGE
TERMINATE
HANDSET
Ⓓ Ⓗ
1 2 3 4 5 6 B
ANALOG

EL9AS057

Ⓐ Press ANALOG switch/indicator for selected channel and observe that it comes on.

Ⓑ Press the PTT pushbutton and tell the party you are going to connect them to the bridge. If other party does not respond, press RING pushbutton.

Ⓒ Set ANALOG BRIDGE/TERMINATE switch above the ANALOG switch/indicator that is on, to BRIDGE.

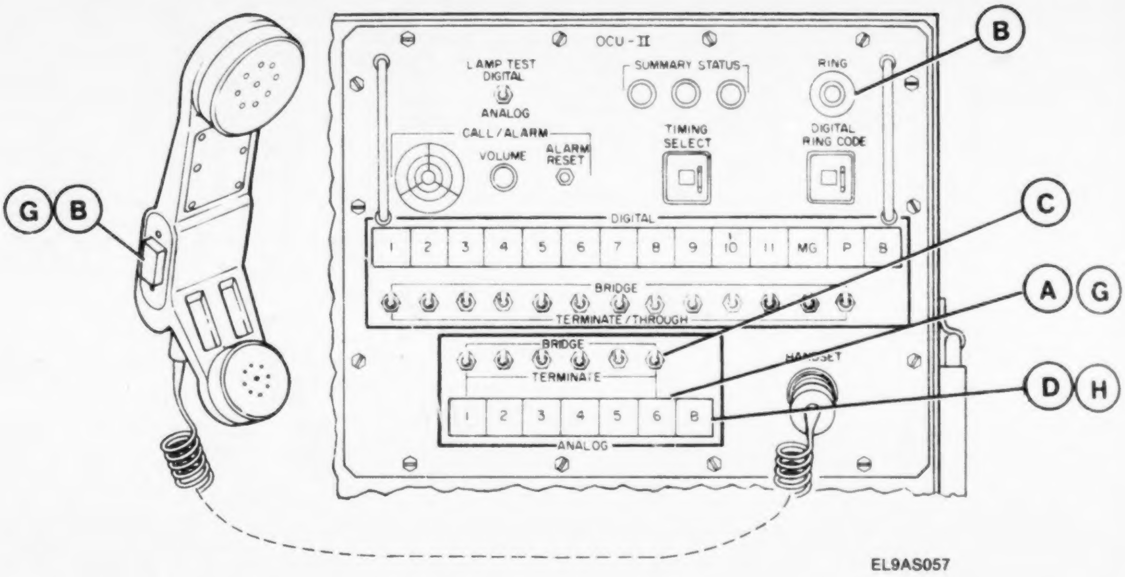
Ⓓ Press the ANALOG B switch indicator.

Ⓔ Tell the party that they are now on the bridge.

Ⓕ Repeat steps Ⓐ , through Ⓔ for all parties that you want to connect to the bridge.

Ⓖ If you do not plan to join the bridged call, press PTT pushbutton and ask the party to alert you by pressing RING pushbutton when the call is concluded and press lit pushbutton/indicator.

2-9. AVOW OPERATION—Continued


OCU-II
LAMP TEST
DIGITAL
ANALOG
SUMMARY STATUS
RING
CALL/ALARM
VOLUME
ALARM RESET
TIMING SELECT
DIGITAL RING CODE
DIGITAL
1 2 3 4 5 6 7 8 9 10 11 MG P B
BRIDGE
TERMINATE/THROUGH
BRIDGE
TERMINATE
1 2 3 4 5 6 B
ANALOG
HANDSET
B
G B
C
A G
D H
EL9AS057

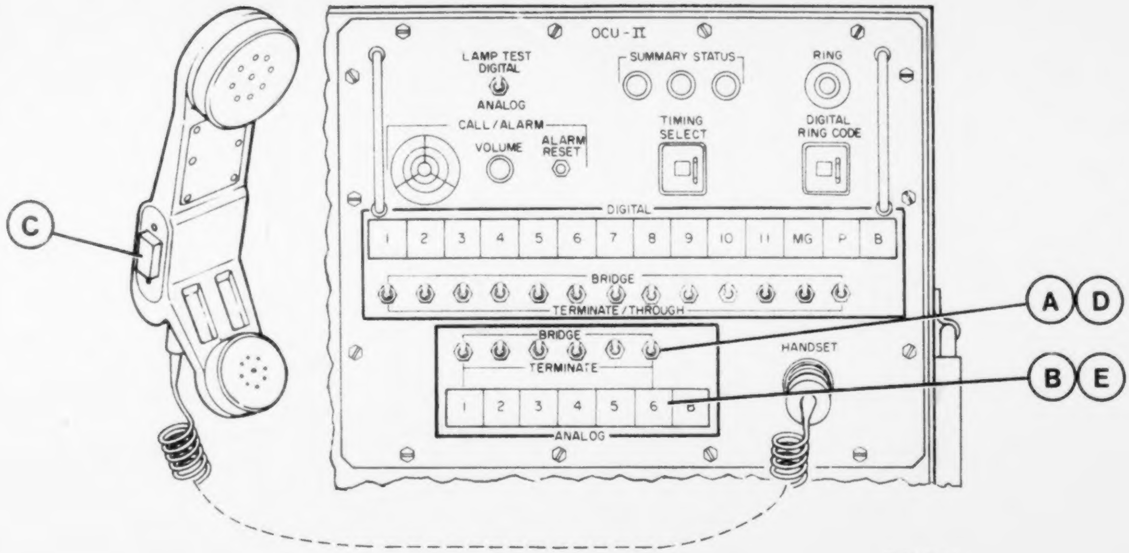
NOTE

When a party on the bridge presses their RING pushbutton, the operator and all other channels connected to the bridge are alerted.

(H) If you plan to join the bridged call, press ANALOG B switch/indicator. Observe that ANALOG B switch/indicator comes on and ANALOG switch/indicator of the channel goes off.

2-9. AVOW OPERATION—Continued

DISCONNECT A CHANNEL FROM THE BRIDGE


OCU-II
LAMP TEST
DIGITAL
ANALOG
SUMMARY STATUS
RING
CALL/ALARM
VOLUME
ALARM RESET
TIMING SELECT
DIGITAL RING CODE
DIGITAL
1 2 3 4 5 6 7 8 9 10 11 MG P B
BRIDGE
TERMINATE/THROUGH
BRIDGE
TERMINATE
HANDSET
1 2 3 4 5 6 B
ANALOG
C
A D
B E

EL9AS058

Ⓐ An ANALOG BRIDGE/TERMINATE switch in BRIDGE position indicates the channel that is connected to the bridge.

Ⓑ Select one of the channels to disconnect from the bridge and press ANALOG switch/indicator for that channel. Observe that the party's switch/indicator comes on.

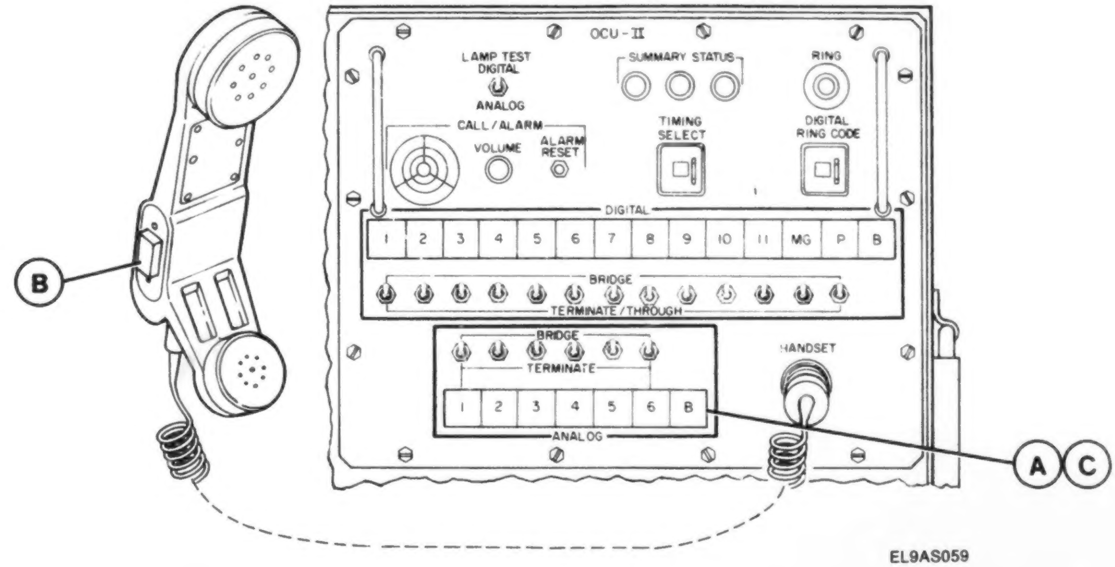
Ⓒ Press PTT pushbutton and tell the party that you are disconnecting them from the bridge.

Ⓓ Set ANALOG BRIDGE/TERMINATE switch for this channel to TERMINATE.

Ⓔ When you have completed your conversation, press ANALOG switch/indicator and observe that it goes off.

2-9. AVOW OPERATION—Continued

CONNECT AND DISCONNECT YOURSELF AND THE BRIDGE


OCU-II
LAMP TEST
DIGITAL
ANALOG
SUMMARY STATUS
RING
CALL/ALARM
VOLUME
ALARM RESET
TIMING SELECT
DIGITAL RING CODE
DIGITAL
1 2 3 4 5 6 7 8 9 10 11 MG P B
BRIDGE
TERMINATE/THROUGH
BRIDGE
TERMINATE
1 2 3 4 5 6 B
ANALOG
HANDSET
B
A
C

EL9AS059

Ⓐ Press ANALOG B switch/indicator and observe that it comes on.

Ⓑ After pressing the PTT pushbutton, you may now talk with all parties connected to the bridge.

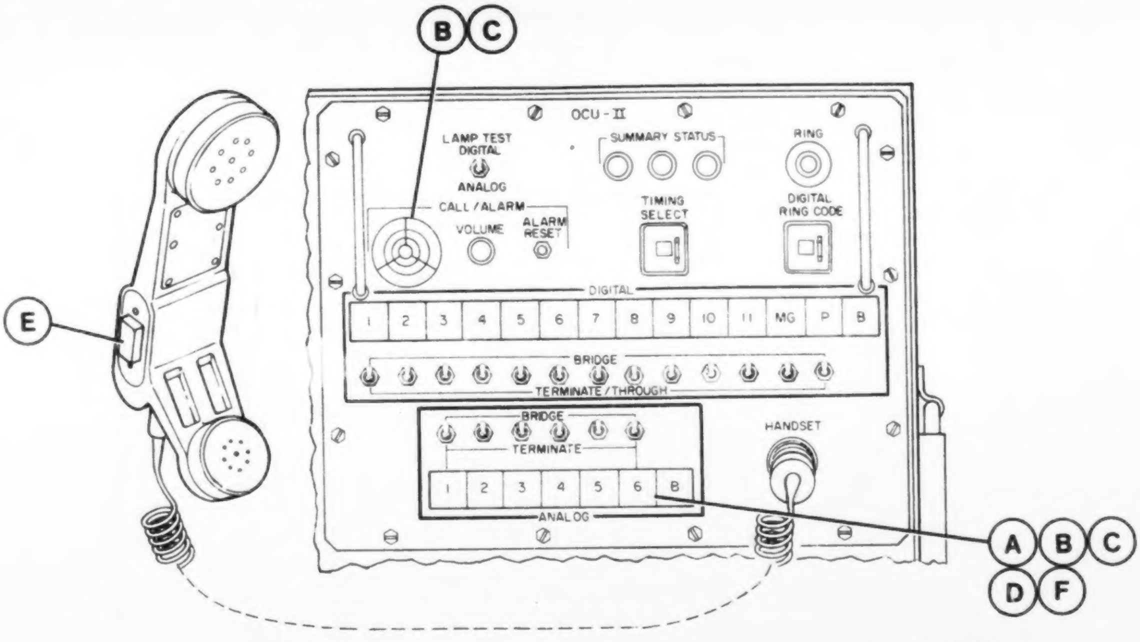
NOTE

If you press RING pushbutton while you are connected to the bridge, you will ring all other parties connected to the bridge.

Ⓒ When you have completed your conversation, press ANALOG B switch/indicator and observe that it turns off. You are now disconnected from the bridge.

2-9. AVOW OPERATION—Continued

ANSWER A RECALL


B
C
OCU - II
LAMP TEST
DIGITAL
ANALOG
SUMMARY STATUS
RING
CALL / ALARM
VOLUME
ALARM RESET
TIMING SELECT
DIGITAL RING CODE
DIGITAL
1
2
3
4
5
6
7
8
9
10
11
MG
P
B
BRIDGE
TERMINATE / THROUGH
BRIDGE
TERMINATE
1
2
3
4
5
6
B
ANALOG
HANDSET
E
A
B
C
D
F

EL9AS060

Ⓐ ANALOG switch/indicator that is on shows that you are connected to an analog channel.

Ⓑ When an ANALOG switch/indicator flashes and the CALL/ALARM sounds, you are being recalled by a party connected to this channel.

Ⓒ Wait approximately three seconds, then press flashing ANALOG switch/indicator and observe that CALL/ALARM is silenced and switch/indicator continues to flash.

Ⓓ Press flashing ANALOG switch/indicator again and observe that it is on continuously.

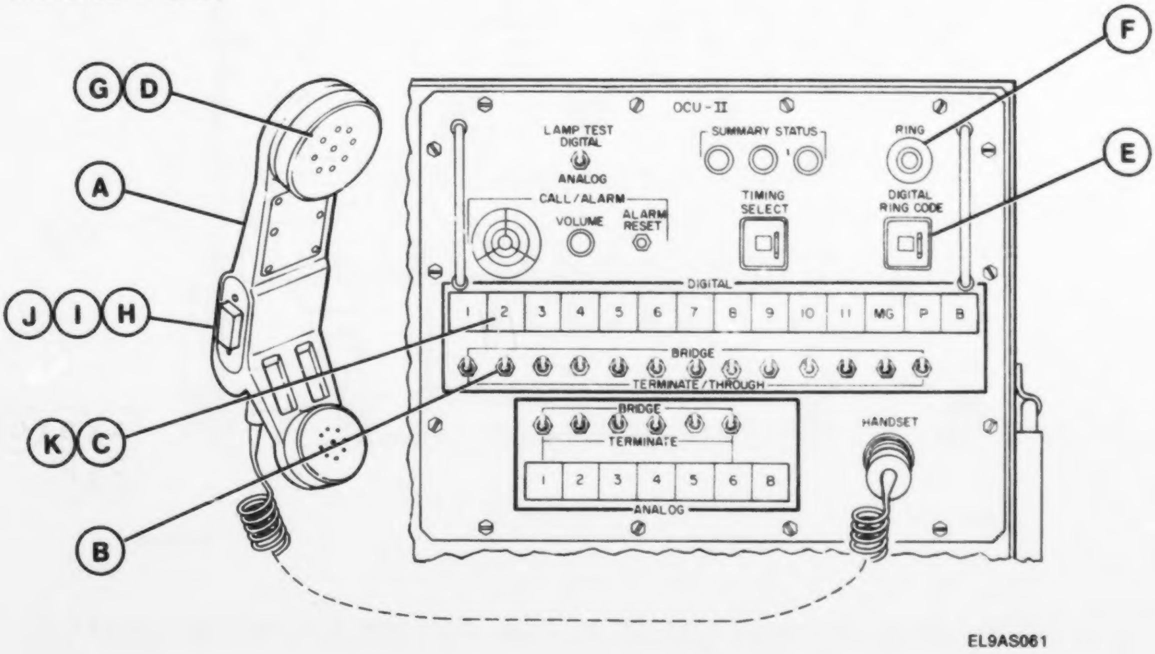
Ⓔ Answer calling party by pressing PTT pushbutton and proceed with the conversation.

Ⓕ When you have completed the conversation, press ANALOG switch/indicator and observe that it goes off.

2-10. DVOW OPERATION

In the DVOW mode of operation you can initiate a call, receive a call, bridge two to 12 channels, or answer a recall. The handset is automatically connected to the DVOWs in this mode, and the handset PTT switch is required.

INITIATE A CALL


G
D
A
J
I
H
K
C
B
F
E
OCU-II
LAMP TEST
DIGITAL
ANALOG
SUMMARY STATUS
RING
CALL/ALARM
VOLUME
ALARM RESET
TIMING SELECT
DIGITAL RING CODE
DIGITAL
1 2 3 4 5 6 7 8 9 10 11 MG P B
BRIDGE
TERMINATE/THROUGH
BRIDGE
TERMINATE
1 2 3 4 5 6 8
ANALOG
HANDSET
EL9AS061

Ⓐ Pick up handset.

Ⓑ Select the channel you want to use.

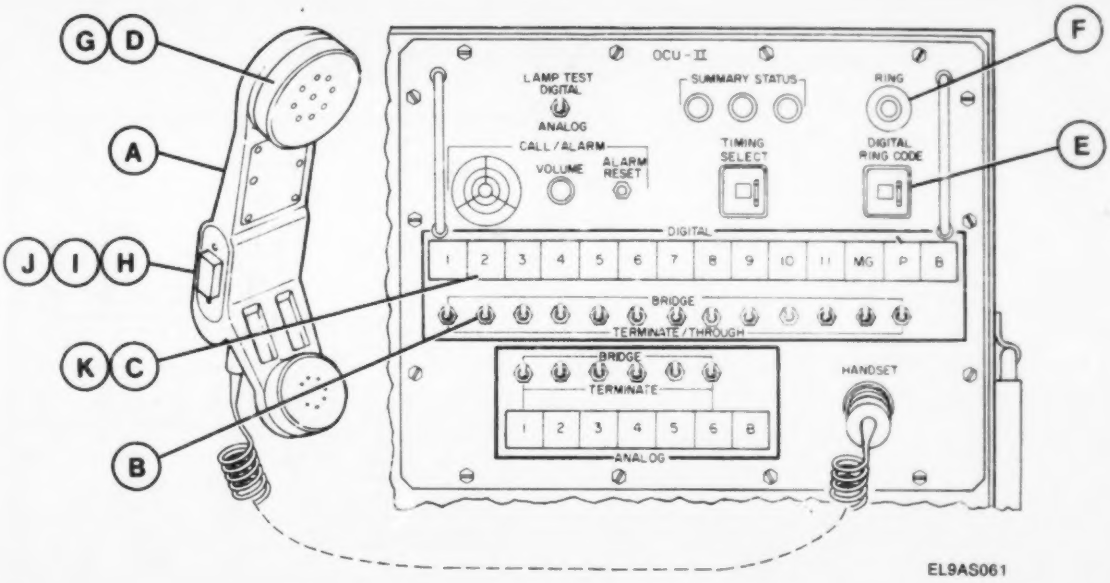
Ⓒ Press DIGITAL switch/indicator for the selected channel and observe that it comes on.

Ⓓ Listen to make sure the channel is not in use.

NOTE

If channel is in use, you have disconnected the parties that were talking. Press DIGITAL switch/indicator again and the parties will be reconnected. Repeat steps A thru D after allowing time for the parties to complete their call.

2-10. DVOW OPERATION—Continued


G D
A
J I H
K C
B
F
E
OCU-II
LAMP TEST
DIGITAL
ANALOG
SUMMARY STATUS
RING
CALL/ALARM
VOLUME
ALARM RESET
TIMING SELECT
DIGITAL RING CODE
DIGITAL
1 2 3 4 5 6 7 8 9 10 11 MG P B
BRIDGE
TERMINATE/THROUGH
BRIDGE
TERMINATE
1 2 3 4 5 6 B
ANALOG
HANDSET
EL9AS061

Ⓔ Set DIGITAL RING CODE thumbwheel switch to the code of the party you are calling.

Ⓕ Momentarily press RING pushbutton to alert the called party.

Ⓖ Listen for the called party to answer with PTT switch released.

Ⓗ Press PTT switch while you proceed with the conversation.

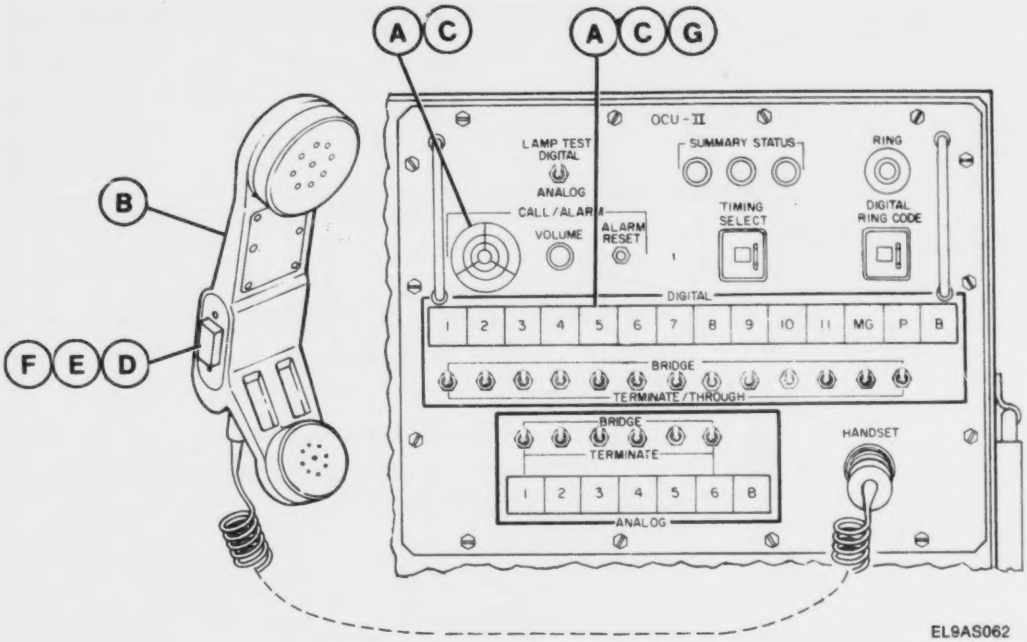
Ⓘ Release PTT switch and wait for the called party to respond.

Ⓙ Repeat steps Ⓗ and Ⓘ until you have completed the call.

Ⓚ When you have completed the conversation, press DIGITAL switch/indicator that is on and observe that it goes off.

2-10. DVOW OPERATION—Continued

RECEIVE A CALL


A
C
A
C
G
B
F
E
D
OCU-II
LAMP TEST
DIGITAL
ANALOG
CALL/ALARM
VOLUME
ALARM RESET
SUMMARY STATUS
TIMING SELECT
RING
DIGITAL RING CODE
DIGITAL
1
2
3
4
5
6
7
8
9
10
11
MG
P
B
BRIDGE
TERMINATE/THROUGH
BRIDGE
TERMINATE
1
2
3
4
5
6
B
ANALOG
HANDSET

EL9AS062

Ⓐ The sounding CALL/ALARM and a flashing DIGITAL switch/indicator alert you to an incoming DVOW call.

Ⓑ Pick up handset.

Ⓒ Press flashing DIGITAL switch/indicator and observe that CALL/ALARM is silent and DIGITAL switch/indicator comes on continuously.

Ⓓ Press and hold PTT switch to answer the call.

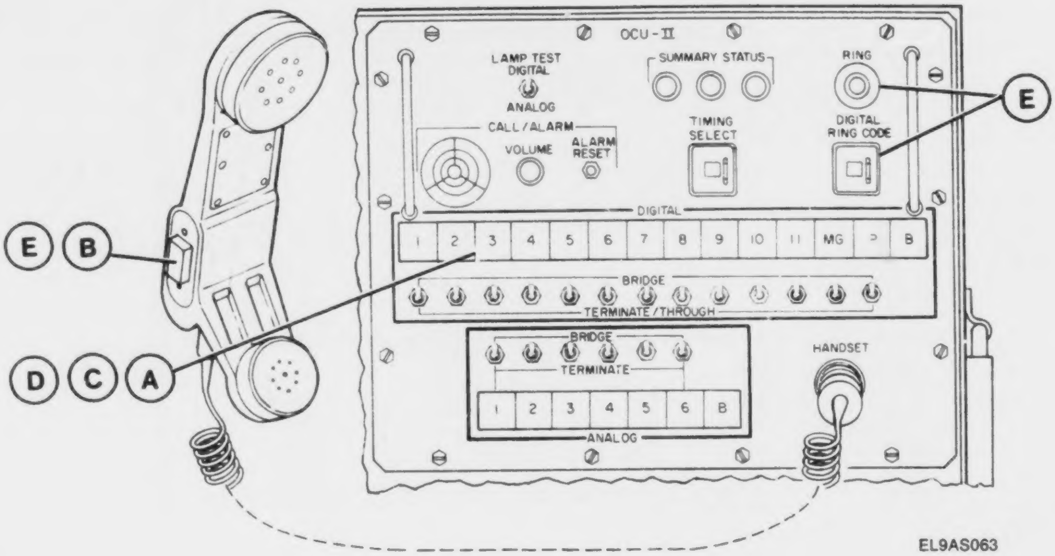
Ⓔ Release PTT switch and wait for the calling party to respond.

Ⓕ Repeat steps Ⓓ and Ⓔ until you have completed the call.

Ⓖ When you have completed the call, press DIGITAL switch/indicator that is on and observe that it goes off.

2-10. DVOW OPERATION—Continued

PLACE A PARTY ON HOLD


OCU-II
LAMP TEST
DIGITAL
ANALOG
SUMMARY STATUS
RING
CALL/ALARM
VOLUME
ALARM RESET
TIMING SELECT
DIGITAL RING CODE
DIGITAL
1 2 3 4 5 6 7 8 9 10 11 MG > B
BRIDGE
TERMINATE/THROUGH
BRIDGE
TERMINATE
1 2 3 4 5 6 B
ANALOG
HANDSET
E
E B
D C A

EL9AS063

Ⓐ A DIGITAL switch/indicator that is on displays the channel you are connected to.

Ⓑ Press PTT switch and tell the party to hold.

Ⓒ Press DIGITAL switch/indicator and observe that it goes off. You are now free to initiate and receive calls on any other channel or join the bridge.

NOTE

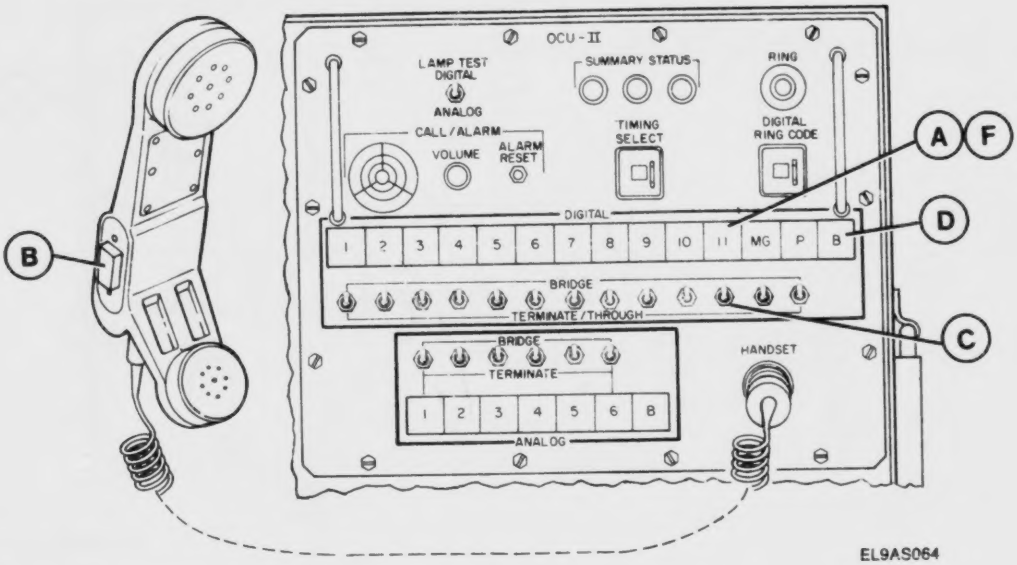
DIGITAL switch/indicators do not indicate when a party is holding. You must remember their channel to reconnect your call.

Ⓓ When you are ready to talk with a party on hold, press DIGITAL switch/indicator for their channel and observe that it comes on.

Ⓔ Press PTT switch and resume your conversation. If the other party does not respond, set DIGITAL RING CODE switch to their number and press RING pushbutton to alert them you are back on the line.

2-10. DVOW OPERATION—Continued

CONNECT A CHANNEL TO THE BRIDGE


OCU-II
LAMP TEST
DIGITAL
ANALOG
SUMMARY STATUS
RING
CALL/ALARM
VOLUME
ALARM RESET
TIMING SELECT
DIGITAL RING CODE
DIGITAL
1 2 3 4 5 6 7 8 9 10 11 MG P B
BRIDGE
TERMINATE/THROUGH
BRIDGE
TERMINATE
1 2 3 4 5 6 B
ANALOG
HANDSET
A
F
B
C
D
EL9AS064

Ⓐ Press DIGITAL switch/indicator for selected channel and observe that it comes on.

Ⓑ Press PTT switch and tell the party you are going to connect them to the bridge. If other party does not respond, set DIGITAL RING CODE switch to the proper code and press RING switch.

Ⓒ Set DIGITAL BRIDGE-TERMINATE/THROUGH switch, below the DIGITAL switch/indicator that is on, to BRIDGE.

NOTE

When a party on the bridge presses RING pushbutton, the bridge operator and all other parties connected to the bridge, that are assigned the same ring code set into the DIGITAL RING CODE switch, are alerted.

Ⓓ Press DIGITAL B switch/indicator and tell the party that they are now on the bridge.

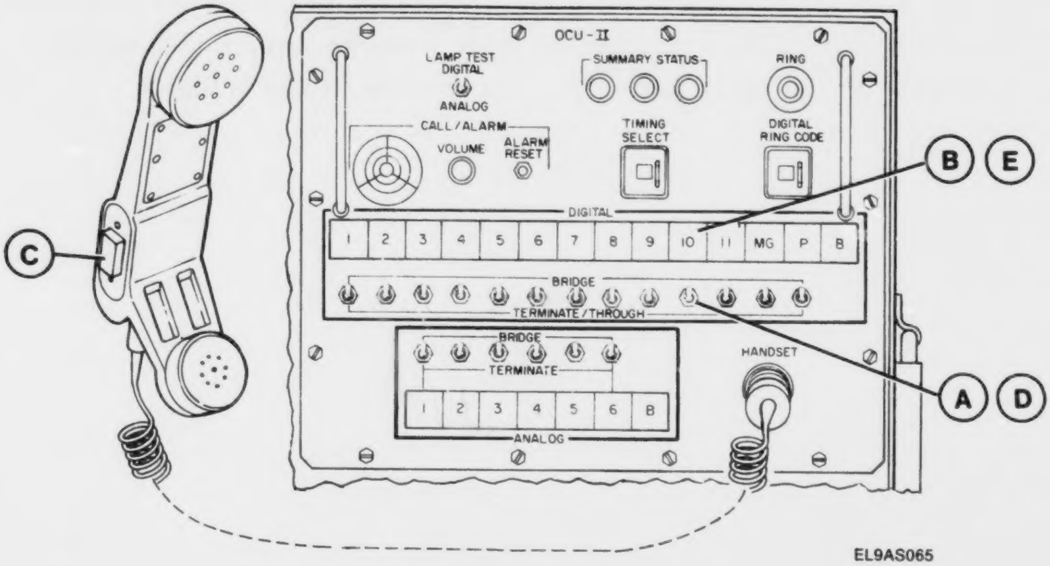
2-10. DVOW OPERATION—Continued

Ⓔ Repeat steps Ⓐ, Ⓑ, Ⓒ, and Ⓓ for all parties that you want to connect to the bridge.

Ⓕ If you plan to join the bridged call, press DIGITAL B switch/indicator. Observe that DIGITAL B switch/indicator comes on and DIGITAL switch/indicator of the party goes off. You are now on the bridge.

2-10. DVOW OPERATION—Continued

DISCONNECT CHANNEL FROM THE BRIDGE


OCU-II
LAMP TEST
DIGITAL
ANALOG
SUMMARY STATUS
RING
CALL/ALARM
VOLUME
ALARM RESET
TIMING SELECT
DIGITAL RING CODE
DIGITAL
1 2 3 4 5 6 7 8 9 10 11 MG P B
BRIDGE
TERMINATE/THROUGH
BRIDGE
TERMINATE
1 2 3 4 5 6 B
ANALOG
HANDSET
A
B
C
D
E

EL9AS065

Ⓐ DIGITAL BRIDGE-TERMINATE/THROUGH switch in the BRIDGE position indicates that the channel is connected to the bridge.

Ⓑ Select one of the channels to disconnect from the bridge and press DIGITAL switch/indicator for that channel. Observe that the switch/indicator comes on.

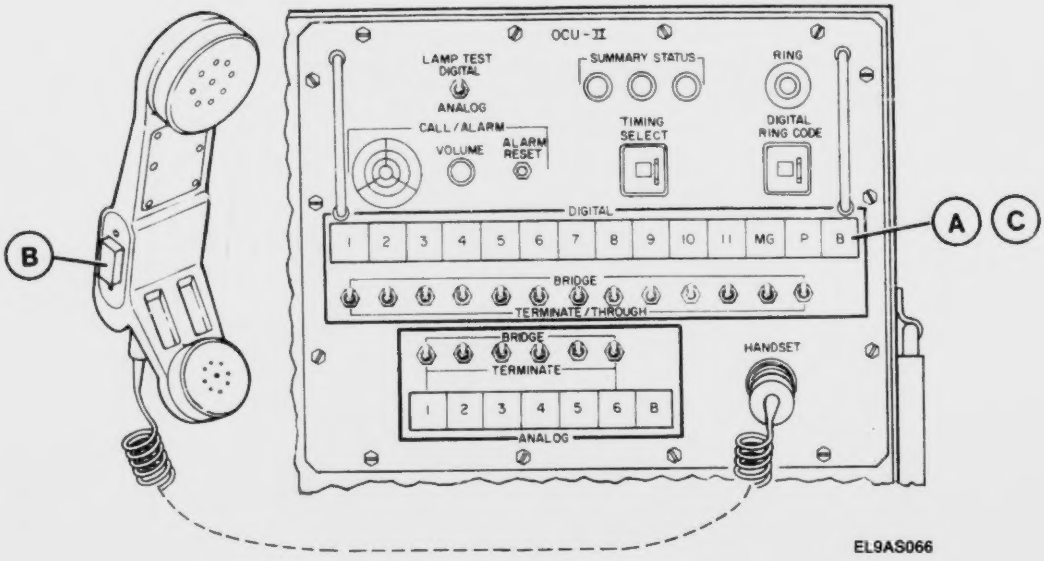
Ⓒ Press PTT switch and tell the party you are disconnecting them from the bridge.

Ⓓ Set DIGITAL BRIDGE-TERMINATE/THROUGH switch for this channel to its original position.

Ⓔ When you have completed your conversation, press the DIGITAL switch/indicator and observe that it goes off.

2-10. DVOW OPERATION—Continued

CONNECT AND DISCONNECT YOURSELF TO AND FROM THE BRIDGE


OCU-II
LAMP TEST
DIGITAL
ANALOG
SUMMARY STATUS
RING
CALL/ALARM
VOLUME
ALARM RESET
TIMING SELECT
DIGITAL RING CODE
DIGITAL
1
2
3
4
5
6
7
8
9
10
11
MG
P
B
BRIDGE
TERMINATE/THROUGH
BRIDGE
TERMINATE
1
2
3
4
5
6
B
ANALOG
HANDSET
A
B
C
EL9AS066

Ⓐ Press DIGITAL B switch/indicator and observe that it comes on.

Ⓑ Press PTT switch and tell all parties you are connected to the bridge.

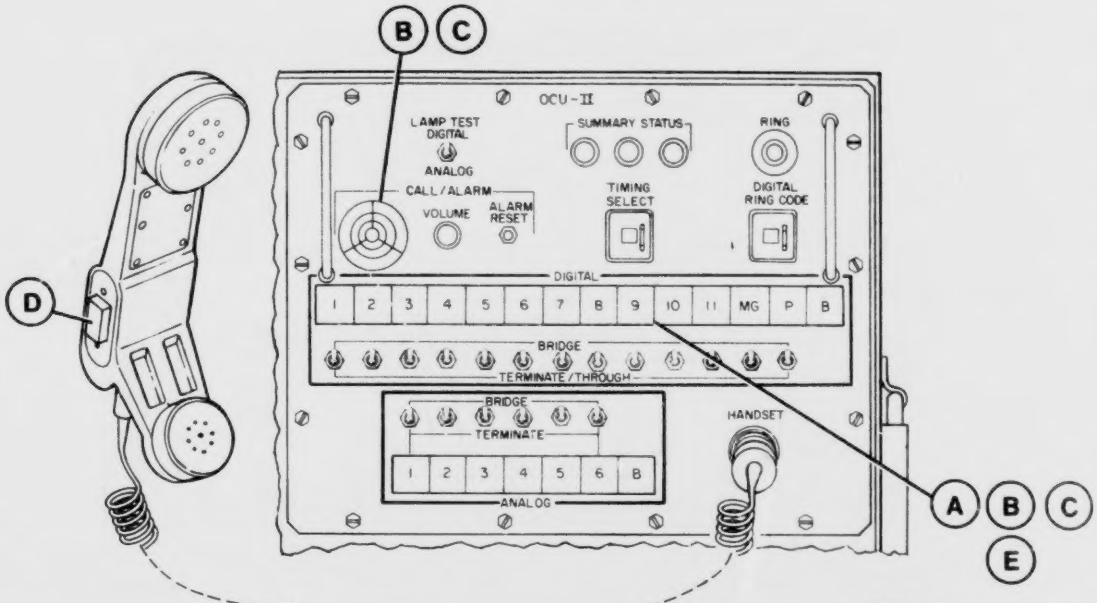
NOTE

If you press RING pushbutton while you are connected to the bridge, you will ring all other parties connected to the bridge that are assigned the same ring code set into the DIGITAL RING CODE switch.

Ⓒ When you have completed your conversation, press DIGITAL B switch/indicator and observe that it goes off. You are now disconnected from the bridge.

2-10. DVOW OPERATION—Continued

ANSWER A RECALL


B C
OCU-II
LAMP TEST
DIGITAL
ANALOG
SUMMARY STATUS
RING
CALL/ALARM
VOLUME
ALARM RESET
TIMING SELECT
DIGITAL RING CODE
D
DIGITAL
1 2 3 4 5 6 7 8 9 10 11 MG P B
BRIDGE
TERMINATE/THROUGH
BRIDGE
TERMINATE
1 2 3 4 5 6 B
ANALOG
HANDSET
A B C
E

EL9AS067

Ⓐ A DIGITAL switch/indicator that is on shows that you are connected to a channel.

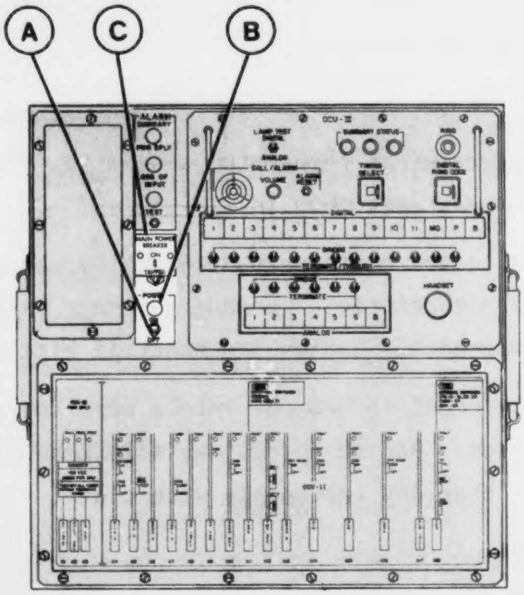
Ⓑ When a DIGITAL switch/indicator flashes and the CALL/ALARM sounds, you are being recalled by a party connected to this channel.

Ⓒ Press flashing DIGITAL switch/indicator, and observe that CALL/ALARM is silenced and the switch/indicator stays lit.

Ⓓ Press PTT switch to answer the calling party and proceed with the conversation.

Ⓔ When you have completed the conversation, press DIGITAL switch/indicator and observe that it goes off.

2-11. EQUIPMENT TURNOFF



EL9AS068

NOTE

When OCU-II is turned off, all AVOW, DVOW, and DOW communications through the station are interrupted. Always notify the control center before turning off OCU-II.

Ⓐ Set POWER ON/OFF switch to OFF.

Ⓑ POWER lamp goes off.

Ⓒ Leave MAIN POWER BREAKER ON.

Section IV. OPERATION UNDER UNUSUAL CONDITIONS

2-12. OPERATING IN UNUSUAL WEATHER

Although intended for use inside a heated/air-conditioned shelter, the OCU-II will operate in the following environments:

a. Arctic Climate.

- The OCU-II operates at temperatures down to -25° F (-32° C) and can be stored at temperatures down to -70° F (-57° C).
- Extreme cold causes components, especially cables and plastic components, to become brittle. Permanent damage can result from mechanical shock to components. Cables can break if kinked or bent.
- When cold equipment is brought into a warm room, moisture will condense on its surfaces. Before operation, allow equipment to warm to room temperature, then dry thoroughly with cloth.

b. Tropical Climate.

- The OCU-II operates at temperatures as high as +145° F (+63° C) and can be stored at temperatures as high as +160° F (+71° C).
- Extreme heat and humidity can cause moisture and fungus growth which can cause improper operation. Keep cover on as much as possible and ventilate the equipment as often as possible.

c. Desert Climate.

- The OCU-II operates at temperatures up to +145° F (+63° C) and can be stored at temperatures up to +160° F (+71° C).
- Windblown sand, dirt, or dust will damage the equipment. Keep cover on as much as possible.

d. Salt Air.

- Salt air can corrode the connectors and controls on the OCU-II. Keep cover on as much as possible and clean surfaces with damp cloth (fresh water).

2-12. OPERATING IN UNUSUAL WEATHER—Continued

e. High Altitudes.

- The OCU-II can operate at altitudes up to 10,000 feet and can be stored at altitudes up to 40,000 feet.

2-13. ELECTRICAL INTERFERENCE

Observe the following guidelines to minimize electrical interference caused by external sources:

a. Keep ground connections secure.
b. Keep cable connections secure.
c. Keep captive screws on the CCA covers secure.

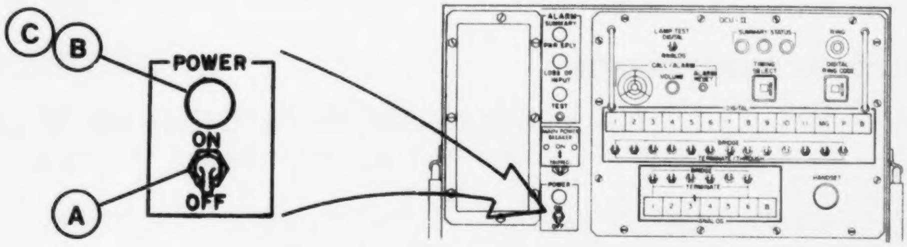
2-14. EMERGENCY PROCEDURES

NOTE

Any shelter or facility circuit breaker controlling power to the OCU-II may control power to other equipment. Assure that the emergency warrants turning off the other equipment before operating this circuit breakers.

2-14. EMERGENCY PROCEDURES—Continued

a. Emergency Turnoff. There are no special emergency turnoff procedures. In an emergency, perform the following:


C
B
POWER
ON
OFF
A
ALARM SUMMARY
PWR SPLY
LOSS OF INPUT
TEST
MAIN POWER BREAKER
ON
TRIPPED
POWER
OCU-II
LAMP TEST
DIGITAL
ANALOG
SUMMARY STATUS
RING
CALL/ALARM
VOLUME
ALARM RESET
TIMING SELECT
DIGITAL RING CODE
DIGITAL
BRIDGE
TERMINATE
THROUGH
HANDSET
ANALOG

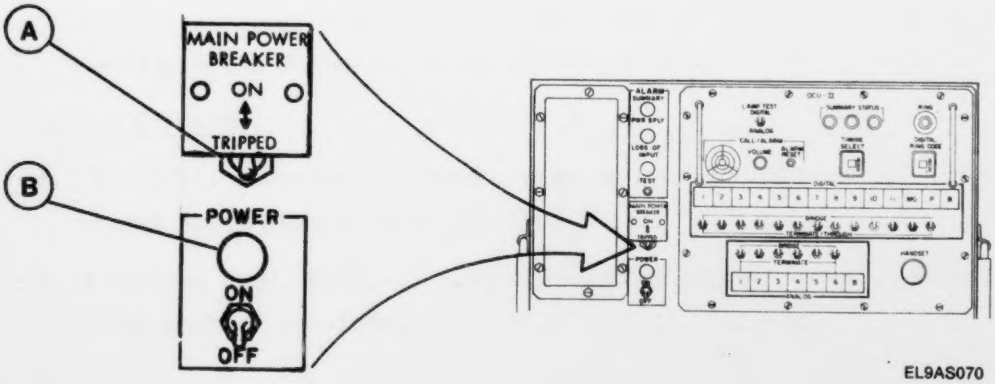
EL9AS069

Ⓐ Quickly set POWER ON/OFF switch to OFF.

Ⓑ POWER lamp should go out.

Ⓒ If POWER lamp fails to go out, trip external circuit breaker supplying facility power to the OCU-II.

b. Power Transients. If power to the OCU-II varies widely, MAIN POWER BREAKER may trip. If this occurs:


A
MAIN POWER BREAKER
ON
TRIPPED
B
POWER
ON
OFF
ALARM SUMMARY
PWR SPLY
LOSS OF INPUT
TEST
MAIN POWER BREAKER
POWER
OCU-II
LAMP TEST
DIGITAL
ANALOG
SUMMARY STATUS
RING
CALL/ALARM
VOLUME
ALARM RESET
TIMING SELECT
DIGITAL RING CODE
DIGITAL
BRIDGE
TERMINATE
THROUGH
HANDSET
ANALOG

EL9AS070

Ⓐ Set MAIN POWER BREAKER to ON.

Ⓑ POWER lamp should light.

CHAPTER 3
OPERATOR MAINTENANCE

For the purpose of this manual, organizational and operator maintenance are one and the same.

CHAPTER 4
ORGANIZATIONAL MAINTENANCE

Page

Section I Repair Parts; Special Tools; Test, Measurement, and Diagnostic Equipment (TMDE); and Support Equipment 4-2

4-1 Common Tools and Equipment 4-2
4-2 Special Tools, TMDE, and Support Equipment 4-2
4-3 Repair Parts 4-2

Section II Service Upon Receipt 4-2

4-4 Unpacking 4-3
4-5 Checking Unpacked Equipment 4-4
4-6 Installation of Mounting Brackets 4-5
4-7 Wiring Connections 4-5

Section III Organizational Preventive Maintenance Checks and Services (PMCS) 4-6

4-8 General 4-6
4-9 PMCS Table 4-6

Section IV Troubleshooting 4-12

4-10 Troubleshooting Procedure 4-12
4-11 Troubleshooting Flowchart (Operator's Control Panel) 4-13
4-12 Troubleshooting Flowchart (Overall OCU-II)...................... 4-16

Section V Maintenance Procedures 4-21

4-13 Organizational Maintenance 4-21
4-14 Removal and Replacement of Front Panel Lamps.................... 4-21
4-15 Removal and Replacement of Control Panel SUMMARY STATUS Lamps 4-22
4-16 Removal and Replacement of Control Panel ANALOG and DIGITAL Push Switch Lamps 4-23
4-17 Removal and Replacement of Logic CCA Compartment Cover Assembly 4-24
4-18 Removal and Replacement of Logic CCAs 4-25
4-19 Removal and Replacement of Power Supply CCA Compartment Cover Assembly 4-29
4-20 Removal and Replacement of Power Supply CCAs 4-30
4-21 Removal and Replacement of Filter Assembly 4-34
4-22 Removal and Replacement of Control Panel Assembly................ 4-36

Section I. REPAIR PARTS; SPECIAL TOOLS; TEST, MEASUREMENT, AND DIAGNOSTIC EQUIPMENT (TMDE); AND SUPPORT EQUIPMENT

4-1. COMMON TOOLS AND EQUIPMENT

For authorized common tools and equipment, refer to Section III Maintenance Allocation Chart (MAC). For Air Force see applicable Table of Allowances (TA).

4-2. SPECIAL TOOLS, TMDE, AND SUPPORT EQUIPMENT

For Repair Parts and Special Tools List (RPSTL), refer to TM 11-5805-726-24P (Army) or TO 31W2-2G-2TRC-14 (USAF).

Maintenance tools and equipment as authorized by the Maintenance Allocation Chart (refer to Appendix B, MAC) for organizational maintenance are as follows:

Tool Kit, Electronic Equipment, TK-101/G, 1 each

4-3. REPAIR PARTS

Repair parts are listed and illustrated in the RPSTL (TM 11-5805-726-24P) covering operator and organizational maintenance for the OCU-II.

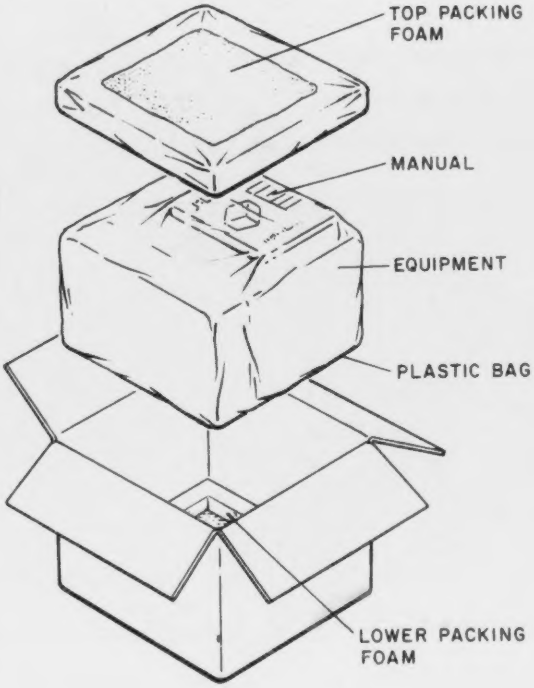
Section II. SERVICE UPON RECEIPT

WARNING

HEAVY EQUIPMENT

This equipment weighs over 35 pounds and can cause serious injury if lifted or carried alone. Do not attempt to lift, carry, or move the equipment by yourself -- use at least two persons.

4-4. UNPACKING


TOP PACKING FOAM
MANUAL
EQUIPMENT
PLASTIC BAG
LOWER PACKING FOAM

EL9AS071

a. Open.

- Use sharp knife to cut reinforcing tape on top of carton.
- Open top of box.

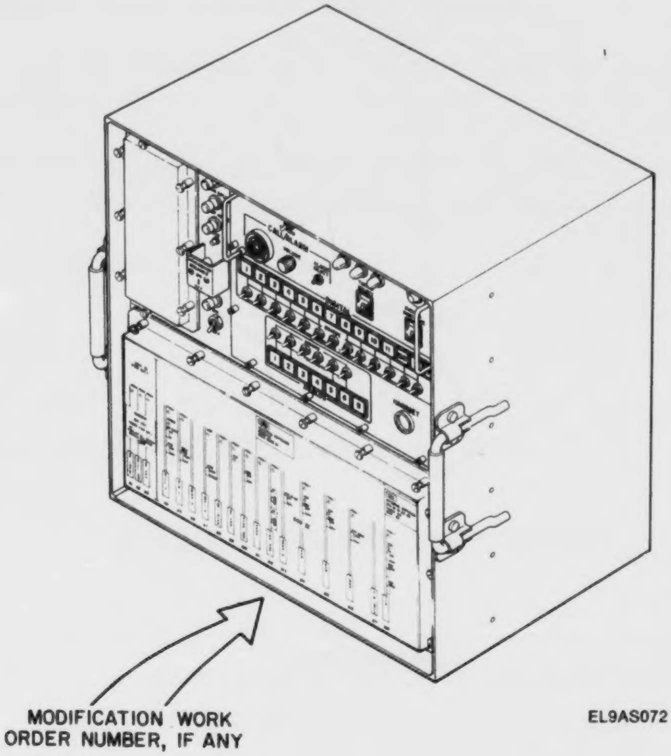
b. Remove OCU-II.

- Lift out top packing.
- Lift out equipment including manual.
- Use sharp knife to slit plastic bag.
- Remove manual and equipment with bag of hardware attached.

4-5. CHECKING UNPACKED EQUIPMENT

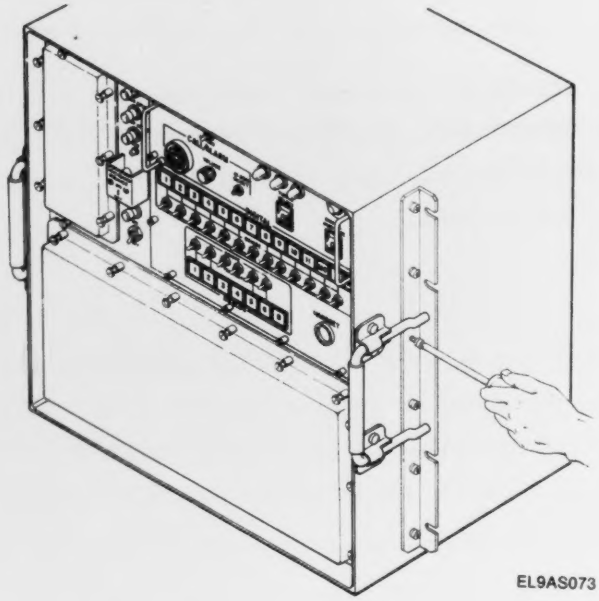
a. Damage. Inspect the equipment for damage incurred during shipment. If equipment has been damaged, report the damage on form SF 364, Report of Discrepancy (ROD).

b. Packing Slip. Check equipment against the packing slip to see if shipment is complete. Report all discrepancies in accordance with the instructions of DA Pam 738-750, Maintenance Management Update.



c. Modifications. Check DA Pam 310-1, Consolidated Index of Army Publications and Blank Forms, for Modification Work Orders (MWO) applicable to this equipment. Compare MWO number (if any) obtained from DA Pam 310-1 with that on equipment. If numbers disagree, equipment must be modified.

4-6. INSTALLATION OF MOUNTING BRACKETS



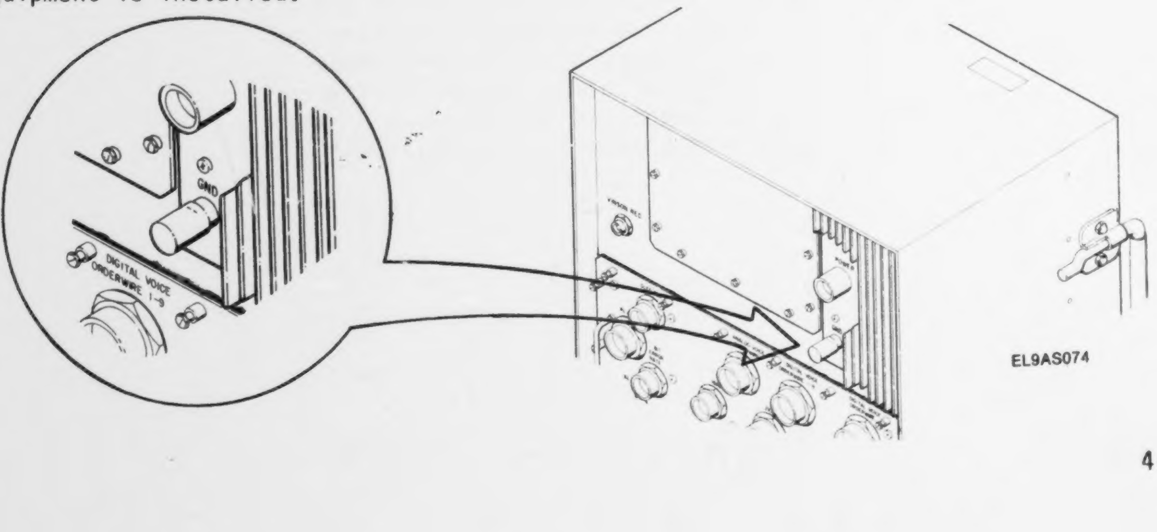
EL9AS073

a. Remove mounting brackets and attaching hardware from bag.

b. Install one mounting bracket to each side of equipment case using No. 2 Phillips screwdriver, six screws, six flat washers, and six lockwashers.

4-7. WIRING CONNECTIONS

Figures FO-1 and FO-2 show typical applications and wiring connections. A ground wire should be attached to ground lug at rear of OCU-II, and remain in place while equipment is installed.



EL9AS074

Section III. ORGANIZATIONAL PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)

4-8. GENERAL

To be sure that your equipment is always ready for your mission, you must do scheduled preventive maintenance checks and services (PMCS). When you are doing any PMCS or routine checks, keep in mind WARNINGS and CAUTIONS about electrical shock and bodily harm.

4-9. PMCS TABLE

A PMCS table for Control, Orderwire C-10717/TRC appears at the end of this section. There is one category or interval of PMCS: B. This letter heads the INTERVAL column of the PMCS table. A dot in the INTERVAL column indicates the check and/or service that should be performed by organizational maintenance personnel at a particular time.

a. B stands for before. B - PMCS should be performed before operation to make sure your equipment is ready to go.

NOTE

Use your PMCS table to get the number for the TM ITEM NO. column of DA Form 2404 (Equipment Inspection and Maintenance Worksheet).

NOTE

If your equipment must be in operation all the time, check and service those items that can be checked and serviced without disturbing operation. Make the complete checks and services when the equipment can be shut down or when orderwire channels are available.

4-9. PMCS TABLE—Continued

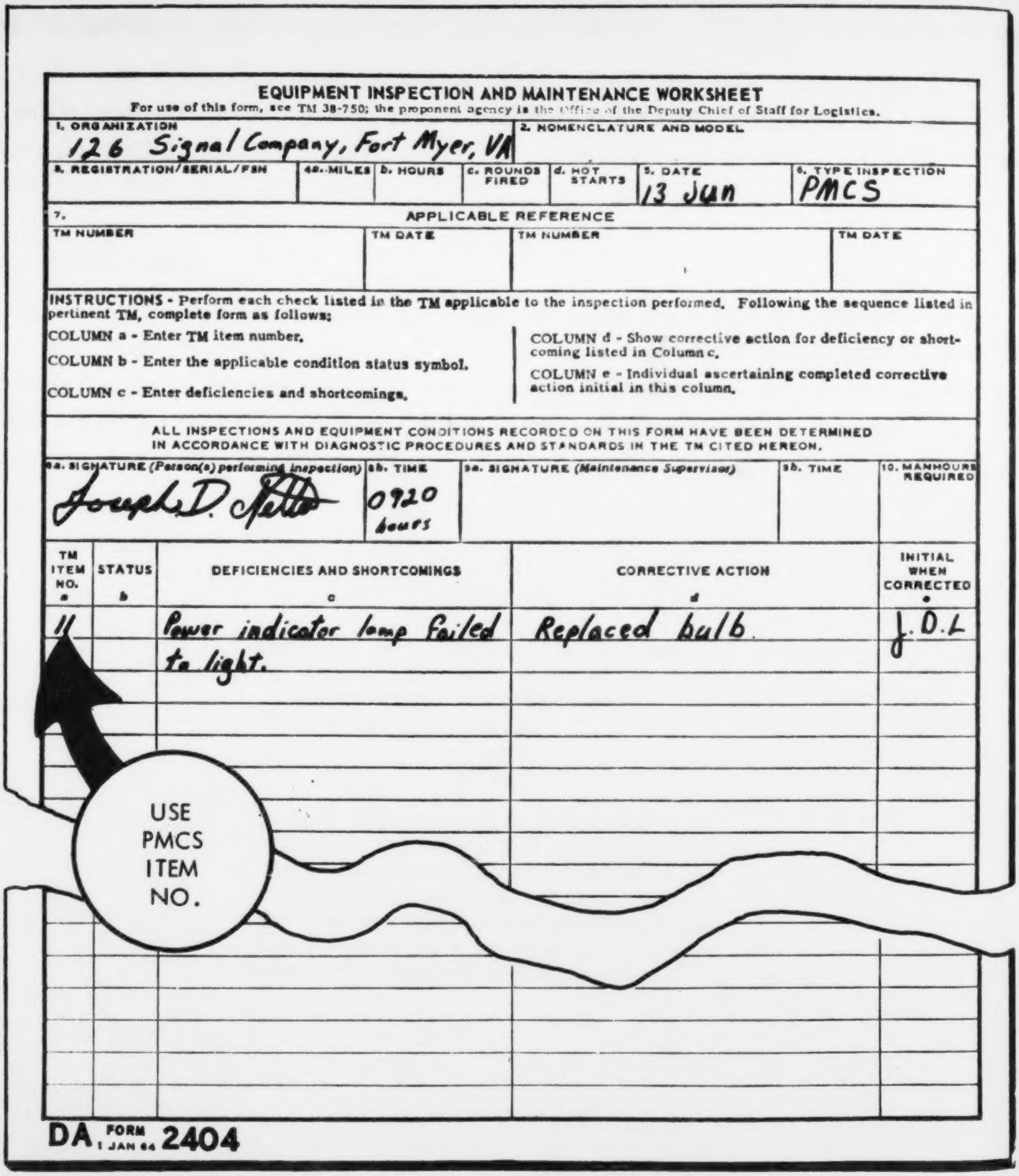
b. Whenever an equipment is reinstalled after removal for any reason, perform the necessary B - PMCS to be sure that the item meets the readiness reporting criteria.

c. Routine checks are not listed as PMCS checks. The following are some of the routine checks:

- Cleaning
- Dusting
- Washing
- Checking for frayed cables
- Storing items not in use
- Covering unused receptacles
- Check for loose nuts, bolts, and screws

d. You should perform routine checks as the need comes up.

4-9. PMCS TABLE—Continued



EQUIPMENT INSPECTION AND MAINTENANCE WORKSHEET

For use of this form, see TM 38-750; the proponent agency is the Office of the Deputy Chief of Staff for Logistics.

1. ORGANIZATION 126 Signal Company, Fort Myer, VA				2. NOMENCLATURE AND MODEL		
3. REGISTRATION/SERIAL/FSN	4a. MILES	b. HOURS	c. ROUNDS FIRED	d. HOT STARTS	5. DATE 13 Jun	6. TYPE INSPECTION PMCS

7. APPLICABLE REFERENCE			
TM NUMBER	TM DATE	TM NUMBER	TM DATE

INSTRUCTIONS - Perform each check listed in the TM applicable to the inspection performed. Following the sequence listed in pertinent TM, complete form as follows:

COLUMN a - Enter TM item number.

COLUMN b - Enter the applicable condition status symbol.

COLUMN c - Enter deficiencies and shortcomings.

COLUMN d - Show corrective action for deficiency or shortcoming listed in Column c.

COLUMN e - Individual ascertaining completed corrective action initial in this column.

ALL INSPECTIONS AND EQUIPMENT CONDITIONS RECORDED ON THIS FORM HAVE BEEN DETERMINED IN ACCORDANCE WITH DIAGNOSTIC PROCEDURES AND STANDARDS IN THE TM CITED HEREON.

8a. SIGNATURE *(Person(s) performing inspection)* Joseph D. [illegible]	8b. TIME 0920 hours	9a. SIGNATURE *(Maintenance Supervisor)*	9b. TIME	10. MANHOURS REQUIRED

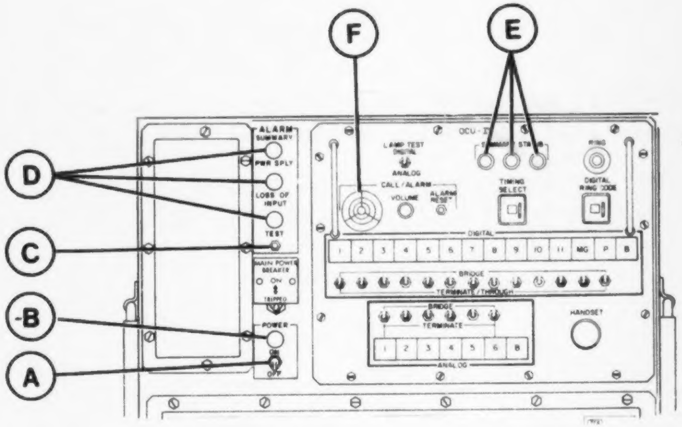
TM ITEM NO. a	STATUS b	DEFICIENCIES AND SHORTCOMINGS c	CORRECTIVE ACTION d	INITIAL WHEN CORRECTED e
11		Power indicator lamp failed to light.	Replaced bulb.	J.D.L

DA FORM 1 JAN 64 2404

USE PMCS ITEM NO.

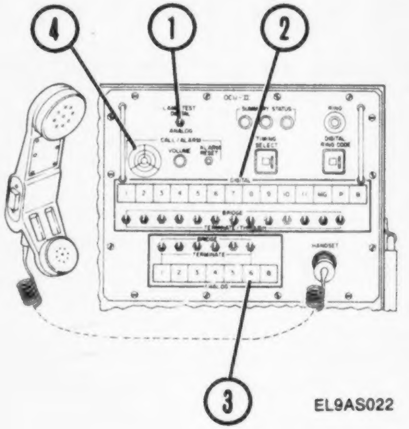
EL9AS020

4-9. PMCS TABLE—Continued

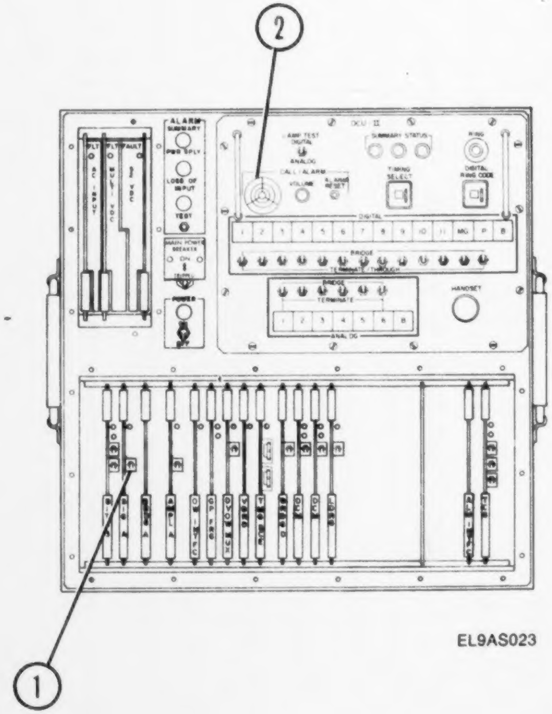
Item No.	Interval B	Item to be Inspected	Procedures Check and Have Repaired or Adjusted as Necessary
			 EL9AS021
1	●	POWER ON	Ⓐ Set POWER ON/OFF switch to ON. Ⓑ POWER lamp lights.
2	●	BITE Test	Ⓒ Press ALARM TEST switch. Ⓓ ALARM (SUMMARY, PWR SPLY, and LOSS OF INPUT) lamps light. Ⓔ STATUS lamps (Red, Amber, Green) light on control panel. Ⓕ CALL/ALARM sounds.

F
E
D
C
B
A
ALARM
SUMMARY
PWR SPLY
LOSS OF INPUT
TEST
MAIN POWER BREAKER
ON
TRIPPED
POWER
ON
OFF
LAMP TEST
DIGITAL
ANALOG
CALL/ALARM
VOLUME
ALARM RESET
TIMING SELECT
RING
DIGITAL RING CODE
DIGITAL
1 2 3 4 5 6 7 8 9 10 11 MG P B
BRIDGE
TERMINATE/THROUGH
BRIDGE
TERMINATE
1 2 3 4 5 6 B
ANALOG
HANDSET

4-9. PMCS TABLE—Continued

Item No.	Interval B	Item to be Inspected	Procedures Check and Have Repaired or Adjusted as Necessary
			
3	●	Control Panel Indicator Lamps	a. Momentarily set LAMP TEST switch (1) to DIGITAL; all DIGITAL switch/indicators (2) come on, and CALL/ALARM (4) sounds. b. Momentarily set LAMP TEST switch (1) to ANALOG; all ANALOG switch/indicators (3) come on, and CALL/ALARM (4) sounds.

4-9. PMCS TABLE—Continued

Item No.	Interval B	Item to be Inspected	Procedures Check and Have Repaired or Adjusted as Necessary
			 1 2 ALARM SUMMARY PWR SPLY LOSS OF INPUT TEST MAIN POWER BREAKER POWER DCU II LAMP TEST DIGITAL ANALOG CALL/ALARM VOLUME ALARM RESET SUMMARY STATUS TIMING SELECT RING DIGITAL RING CODE PROBE TERMINATE THROUGH HANDSET EL9AS023
4	•	Self RING Test	a. Remove logic CCA cover. b. Momentarily set RING TEST switch ① to the UP position. c. CALL/ALARM ② sounds.
5	•		Reference Operator PMCS, paragraph 2-5, for all further tests.

Section IV. TROUBLESHOOTING

4-10. TROUBLESHOOTING PROCEDURE

The flowchart information is based on visual symptoms obtained from the OCU-II BITE lamps. Before troubleshooting, check that all CCA switches are set as directed by the system control point.

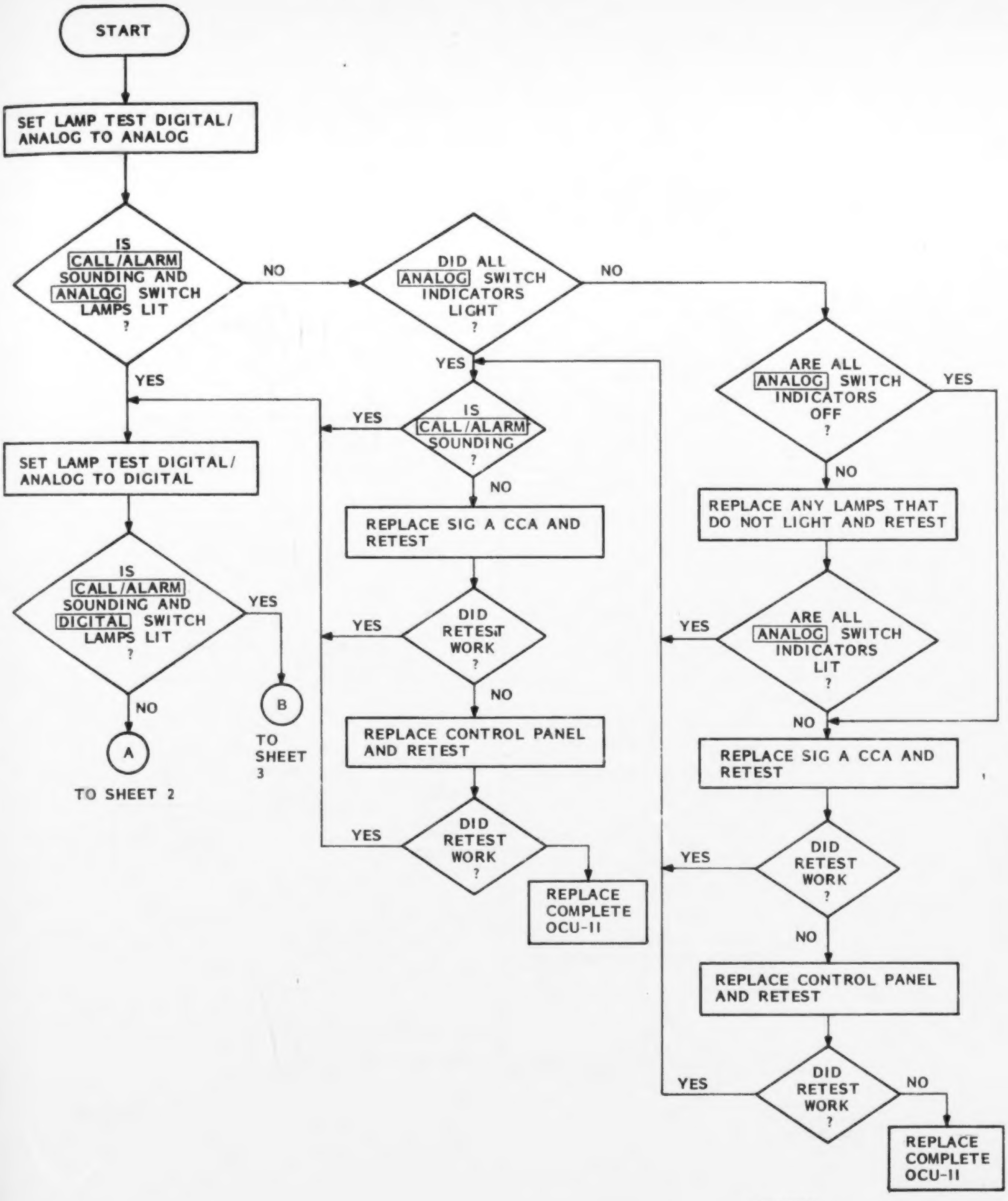
The flowcharts are step-by-step paths through the OCU-II. All decisions are made in the diamond shaped (◇) boxes and require a yes or no answer. All instructions are given in the rectangular shaped boxes (□) and must be accomplished before moving on with the procedure. When the word END is reached, the fault should be corrected.

When replacing a CCA that has settable switches:

- Note positions of switches on old CCA.
- Set switches on new CCA in same positions.

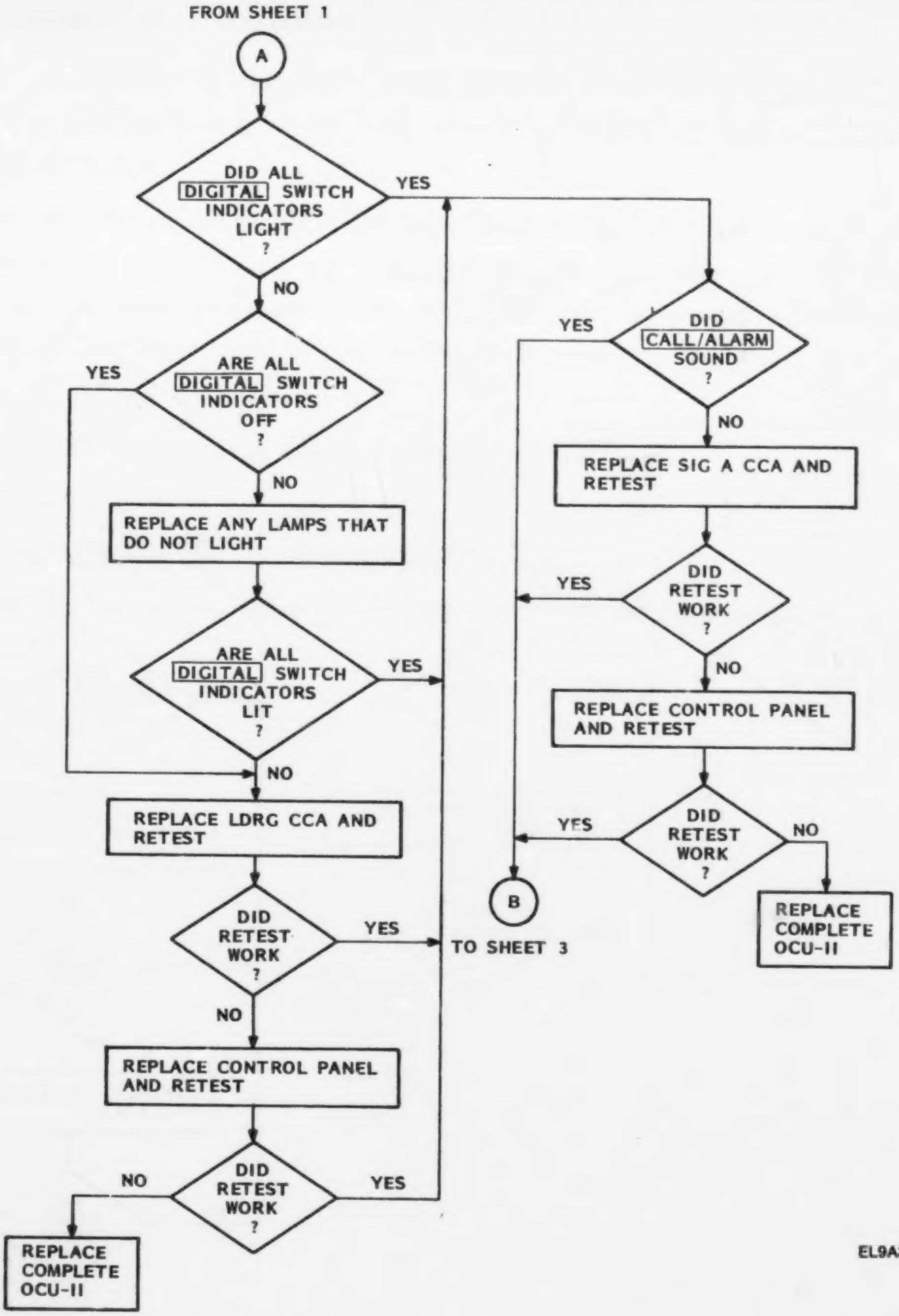
If faults occur during system setup, check that all switches are properly set.

4-11. TROUBLESHOOTING FLOWCHART (OPERATOR'S CONTROL PANEL)—Sheet 1 of 3


START
SET LAMP TEST DIGITAL/ ANALOG TO ANALOG
IS CALL/ALARM SOUNDING AND ANALOG SWITCH LAMPS LIT ?
NO
DID ALL ANALOG SWITCH INDICATORS LIGHT ?
NO
ARE ALL ANALOG SWITCH INDICATORS OFF ?
YES
YES
YES
IS CALL/ALARM SOUNDING ?
YES
NO
SET LAMP TEST DIGITAL/ ANALOG TO DIGITAL
REPLACE SIG A CCA AND RETEST
NO
REPLACE ANY LAMPS THAT DO NOT LIGHT AND RETEST
IS CALL/ALARM SOUNDING AND DIGITAL SWITCH LAMPS LIT ?
YES
YES
DID RETEST WORK ?
YES
ARE ALL ANALOG SWITCH INDICATORS LIT ?
NO
B
TO SHEET 3
NO
A
TO SHEET 2
NO
REPLACE CONTROL PANEL AND RETEST
NO
REPLACE SIG A CCA AND RETEST
YES
DID RETEST WORK ?
REPLACE COMPLETE OCU-II
YES
DID RETEST WORK ?
NO
REPLACE CONTROL PANEL AND RETEST
YES
DID RETEST WORK ?
NO
REPLACE COMPLETE OCU-II

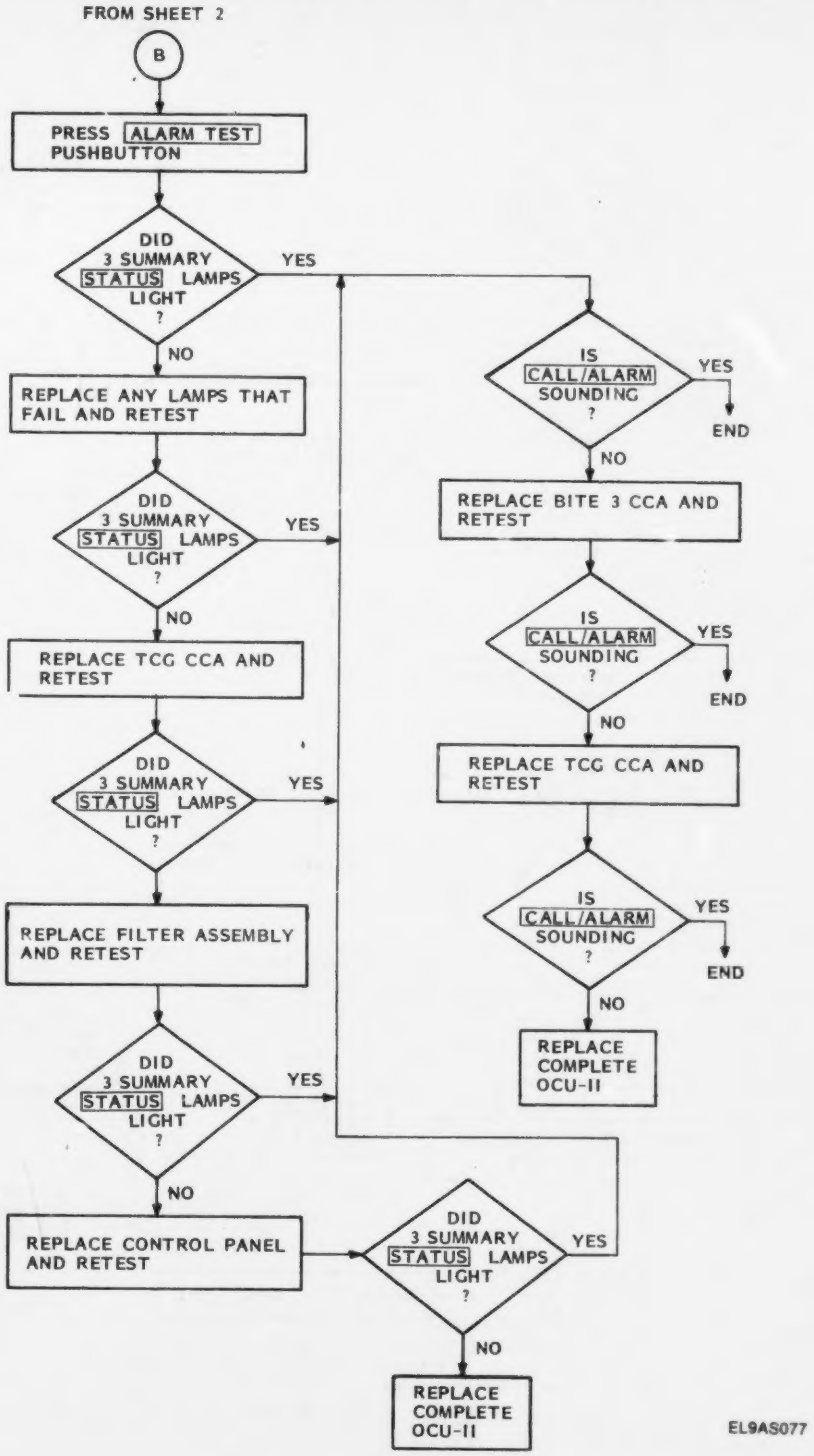
EL9AS075

4-11. TROUBLESHOOTING FLOWCHART (OPERATOR'S CONTROL PANEL)—Sheet 2 of 3

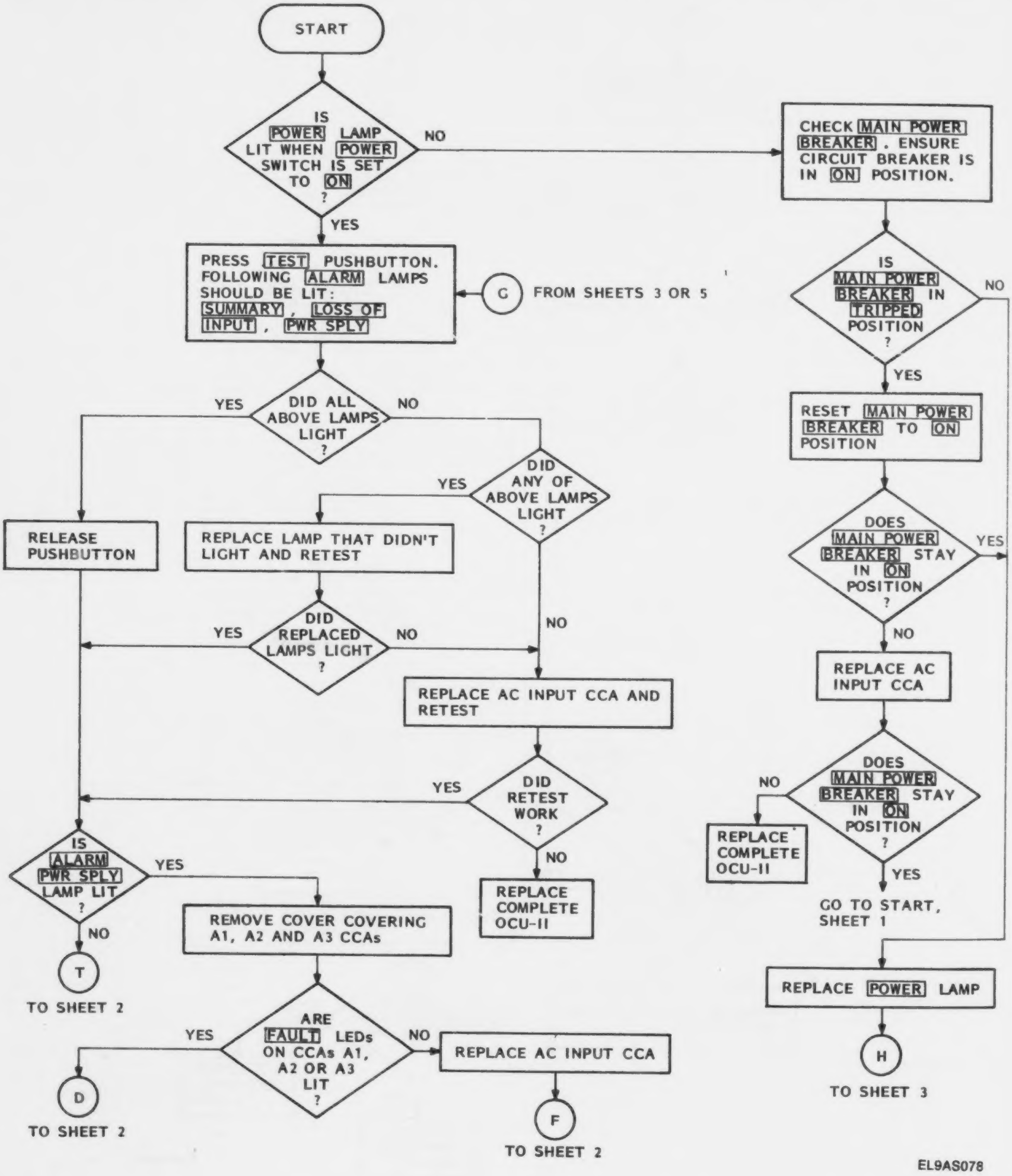

FROM SHEET 1
A
DID ALL DIGITAL SWITCH INDICATORS LIGHT ?
YES
NO
ARE ALL DIGITAL SWITCH INDICATORS OFF ?
YES
NO
REPLACE ANY LAMPS THAT DO NOT LIGHT
ARE ALL DIGITAL SWITCH INDICATORS LIT ?
YES
NO
REPLACE LDRG CCA AND RETEST
DID RETEST WORK ?
YES
NO
REPLACE CONTROL PANEL AND RETEST
DID RETEST WORK ?
NO
YES
REPLACE COMPLETE OCU-II
DID CALL/ALARM SOUND ?
YES
NO
REPLACE SIG A CCA AND RETEST
DID RETEST WORK ?
YES
NO
REPLACE CONTROL PANEL AND RETEST
DID RETEST WORK ?
YES
NO
REPLACE COMPLETE OCU-II
B
TO SHEET 3

EL9AS076

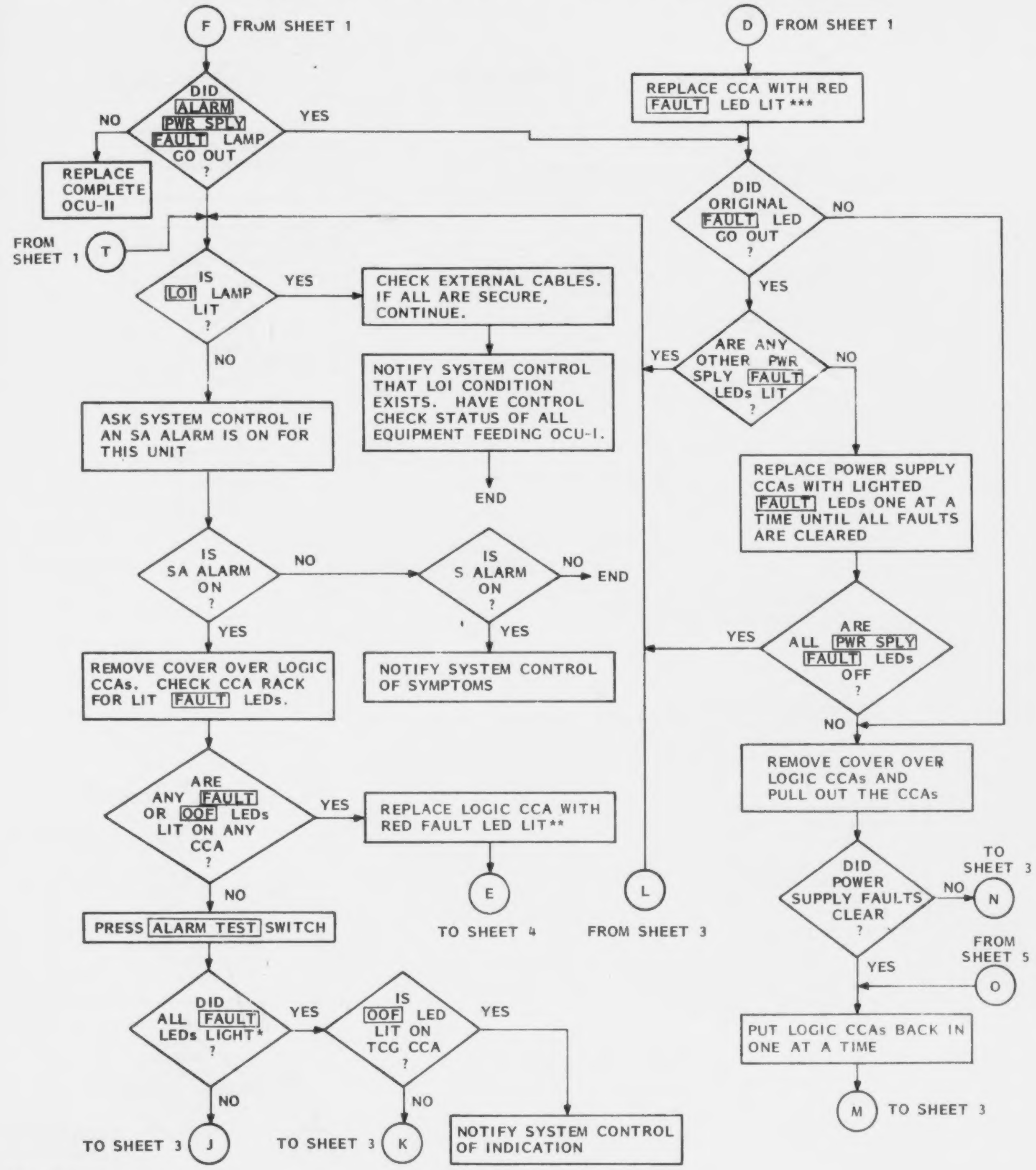
4-11. TROUBLESHOOTING FLOWCHART (OPERATOR'S CONTROL PANEL)—Sheet 3 of 3


FROM SHEET 2
B
PRESS ALARM TEST PUSHBUTTON
DID 3 SUMMARY STATUS LAMPS LIGHT ?
YES
NO
REPLACE ANY LAMPS THAT FAIL AND RETEST
DID 3 SUMMARY STATUS LAMPS LIGHT ?
YES
NO
REPLACE TCG CCA AND RETEST
DID 3 SUMMARY STATUS LAMPS LIGHT ?
YES
REPLACE FILTER ASSEMBLY AND RETEST
DID 3 SUMMARY STATUS LAMPS LIGHT ?
YES
NO
REPLACE CONTROL PANEL AND RETEST
DID 3 SUMMARY STATUS LAMPS LIGHT ?
YES
NO
REPLACE COMPLETE OCU-II
IS CALL/ALARM SOUNDING ?
YES
END
NO
REPLACE BITE 3 CCA AND RETEST
IS CALL/ALARM SOUNDING ?
YES
END
NO
REPLACE TCG CCA AND RETEST
IS CALL/ALARM SOUNDING ?
YES
END
NO
REPLACE COMPLETE OCU-II
EL9AS077

4-12. TROUBLESHOOTING FLOWCHART (OVERALL OCU-II)—Sheet 1 of 5


START
IS POWER LAMP LIT WHEN POWER SWITCH IS SET TO ON ?
NO
YES
CHECK MAIN POWER BREAKER . ENSURE CIRCUIT BREAKER IS IN ON POSITION.
PRESS TEST PUSHBUTTON. FOLLOWING ALARM LAMPS SHOULD BE LIT: SUMMARY , LOSS OF INPUT , PWR SPLY
G
FROM SHEETS 3 OR 5
IS MAIN POWER BREAKER IN TRIPPED POSITION ?
NO
YES
DID ALL ABOVE LAMPS LIGHT ?
YES
NO
RESET MAIN POWER BREAKER TO ON POSITION
DID ANY OF ABOVE LAMPS LIGHT ?
YES
NO
RELEASE PUSHBUTTON
REPLACE LAMP THAT DIDN'T LIGHT AND RETEST
DOES MAIN POWER BREAKER STAY IN ON POSITION ?
YES
NO
DID REPLACED LAMPS LIGHT ?
YES
NO
REPLACE AC INPUT CCA AND RETEST
REPLACE AC INPUT CCA
DID RETEST WORK ?
YES
NO
DOES MAIN POWER BREAKER STAY IN ON POSITION ?
NO
YES
REPLACE COMPLETE OCU-II
IS ALARM PWR SPLY LAMP LIT ?
YES
NO
REMOVE COVER COVERING A1, A2 AND A3 CCAs
REPLACE COMPLETE OCU-II
GO TO START, SHEET 1
REPLACE POWER LAMP
T
TO SHEET 2
ARE FAULT LEDs ON CCAs A1, A2 OR A3 LIT ?
YES
NO
REPLACE AC INPUT CCA
H
TO SHEET 3
D
TO SHEET 2
F
TO SHEET 2
EL9AS078

4-12. TROUBLESHOOTING FLOWCHART (OVERALL OCU-II)—Sheet 2 of 5


F FROM SHEET 1
DID ALARM PWR SPLY FAULT LAMP GO OUT ?
NO
YES
REPLACE COMPLETE OCU-II
FROM SHEET 1 T
IS LOI LAMP LIT ?
YES
NO
CHECK EXTERNAL CABLES. IF ALL ARE SECURE, CONTINUE.
NOTIFY SYSTEM CONTROL THAT LOI CONDITION EXISTS. HAVE CONTROL CHECK STATUS OF ALL EQUIPMENT FEEDING OCU-I.
END
ASK SYSTEM CONTROL IF AN SA ALARM IS ON FOR THIS UNIT
IS SA ALARM ON ?
NO
YES
IS S ALARM ON ?
NO
END
YES
NOTIFY SYSTEM CONTROL OF SYMPTOMS
REMOVE COVER OVER LOGIC CCAs. CHECK CCA RACK FOR LIT FAULT LEDs.
ARE ANY FAULT OR OOF LEDs LIT ON ANY CCA ?
YES
NO
REPLACE LOGIC CCA WITH RED FAULT LED LIT**
E
TO SHEET 4
PRESS ALARM TEST SWITCH
DID ALL FAULT LEDs LIGHT* ?
YES
NO
TO SHEET 3 J
IS OOF LED LIT ON TCG CCA ?
YES
NO
TO SHEET 3 K
NOTIFY SYSTEM CONTROL OF INDICATION
L
FROM SHEET 3
D FROM SHEET 1
REPLACE CCA WITH RED FAULT LED LIT***
DID ORIGINAL FAULT LED GO OUT ?
NO
YES
ARE ANY OTHER PWR SPLY FAULT LEDs LIT ?
YES
NO
REPLACE POWER SUPPLY CCAs WITH LIGHTED FAULT LEDs ONE AT A TIME UNTIL ALL FAULTS ARE CLEARED
ARE ALL PWR SPLY FAULT LEDs OFF ?
YES
NO
REMOVE COVER OVER LOGIC CCAs AND PULL OUT THE CCAs
DID POWER SUPPLY FAULTS CLEAR ?
NO
TO SHEET 3 N
YES
FROM SHEET 5 O
PUT LOGIC CCAs BACK IN ONE AT A TIME
M TO SHEET 3

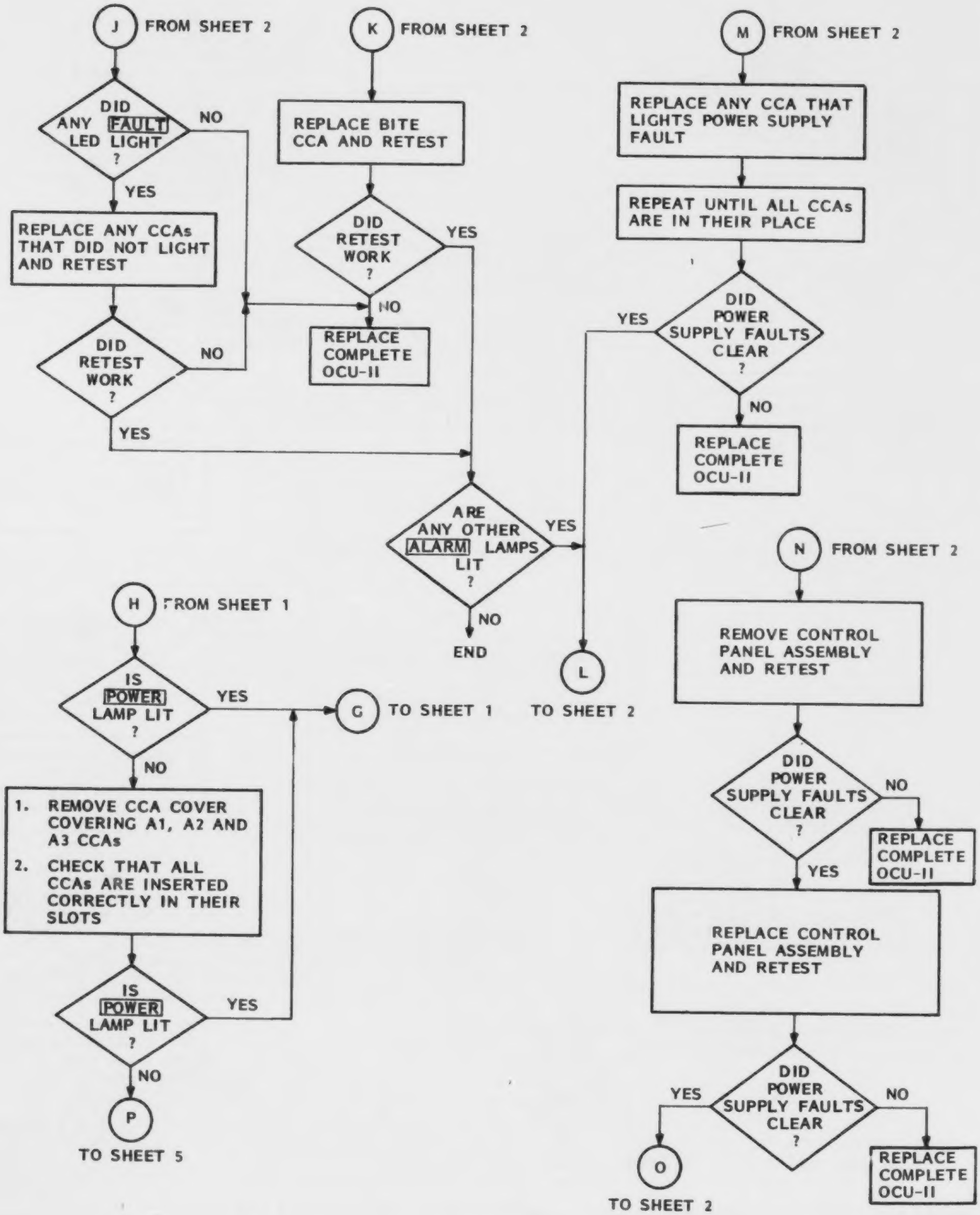
*ERROR AND OOF LEDs NEED NOT LIGHT.

**REPLACE BITE 3 IF ITS FAULT LED IS ON.

***REPLACE A1 CCA FIRST IF ITS FAULT LED IS ON.

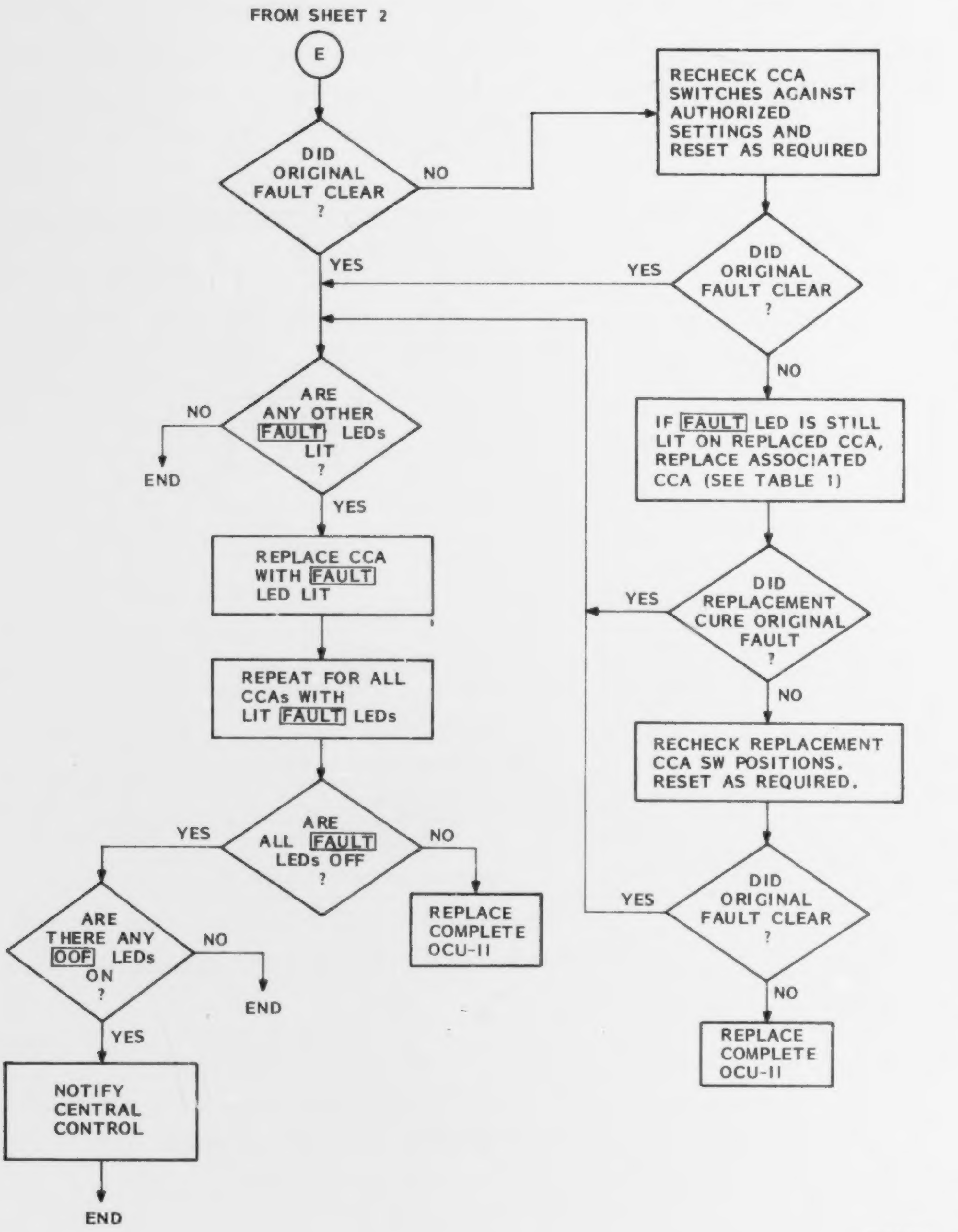
EL9AS079

4-12. TROUBLESHOOTING FLOWCHART (OVERALL OCU-II)—Sheet 3 of 5


J FROM SHEET 2
DID ANY FAULT LED LIGHT ?
NO
YES
REPLACE ANY CCAs THAT DID NOT LIGHT AND RETEST
DID RETEST WORK ?
NO
YES
K FROM SHEET 2
REPLACE BITE CCA AND RETEST
DID RETEST WORK ?
YES
NO
REPLACE COMPLETE OCU-II
M FROM SHEET 2
REPLACE ANY CCA THAT LIGHTS POWER SUPPLY FAULT
REPEAT UNTIL ALL CCAs ARE IN THEIR PLACE
DID POWER SUPPLY FAULTS CLEAR ?
YES
NO
REPLACE COMPLETE OCU-II
ARE ANY OTHER ALARM LAMPS LIT ?
YES
NO
END
L TO SHEET 2
H FROM SHEET 1
IS POWER LAMP LIT ?
YES
G TO SHEET 1
NO
1. REMOVE CCA COVER COVERING A1, A2 AND A3 CCAs
2. CHECK THAT ALL CCAs ARE INSERTED CORRECTLY IN THEIR SLOTS
IS POWER LAMP LIT ?
YES
NO
P TO SHEET 5
N FROM SHEET 2
REMOVE CONTROL PANEL ASSEMBLY AND RETEST
DID POWER SUPPLY FAULTS CLEAR ?
NO
REPLACE COMPLETE OCU-II
YES
REPLACE CONTROL PANEL ASSEMBLY AND RETEST
DID POWER SUPPLY FAULTS CLEAR ?
YES
NO
O TO SHEET 2
REPLACE COMPLETE OCU-II

EL9AS080

4-12. TROUBLESHOOTING FLOWCHART (OVERALL OCU-II)—Sheet 4 of 5


FROM SHEET 2
E
DID ORIGINAL FAULT CLEAR ?
NO
RECHECK CCA SWITCHES AGAINST AUTHORIZED SETTINGS AND RESET AS REQUIRED
YES
DID ORIGINAL FAULT CLEAR ?
YES
NO
ARE ANY OTHER FAULT LEDs LIT ?
NO
END
YES
IF FAULT LED IS STILL LIT ON REPLACED CCA, REPLACE ASSOCIATED CCA (SEE TABLE 1)
REPLACE CCA WITH FAULT LED LIT
YES
DID REPLACEMENT CURE ORIGINAL FAULT ?
NO
REPEAT FOR ALL CCAs WITH LIT FAULT LEDs
RECHECK REPLACEMENT CCA SW POSITIONS. RESET AS REQUIRED.
YES
ARE ALL FAULT LEDs OFF ?
NO
REPLACE COMPLETE OCU-II
YES
DID ORIGINAL FAULT CLEAR ?
ARE THERE ANY OOF LEDs ON ?
NO
END
NO
YES
REPLACE COMPLETE OCU-II
NOTIFY CENTRAL CONTROL
END

EL9AS081

4-12. TROUBLESHOOTING FLOWCHART (OVERALL OCU-II)—Sheet 5 of 5

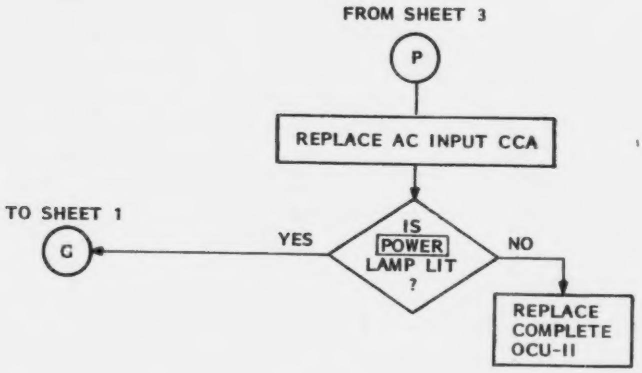

FROM SHEET 3
P
REPLACE AC INPUT CCA
IS POWER LAMP LIT ?
YES
NO
TO SHEET 1
G
REPLACE COMPLETE OCU-II

TABLE 1

CCA REPLACED	ASSOCIATED CCA
VBRD	TMG SCE, BITE 3
TMG SCE	REMOTE CONTROL PANEL, BITE 3
LDRG	TMG SCE, BITE 3
TCG	ALARM INTERFACE, BITE 3
DCM	TMG SCE, BITE 3
OW INTFC	TMG SCE, GP FRG, BITE 3
GP FRG	TMG SCE, OW INTFC, BITE 3

EL9AS082

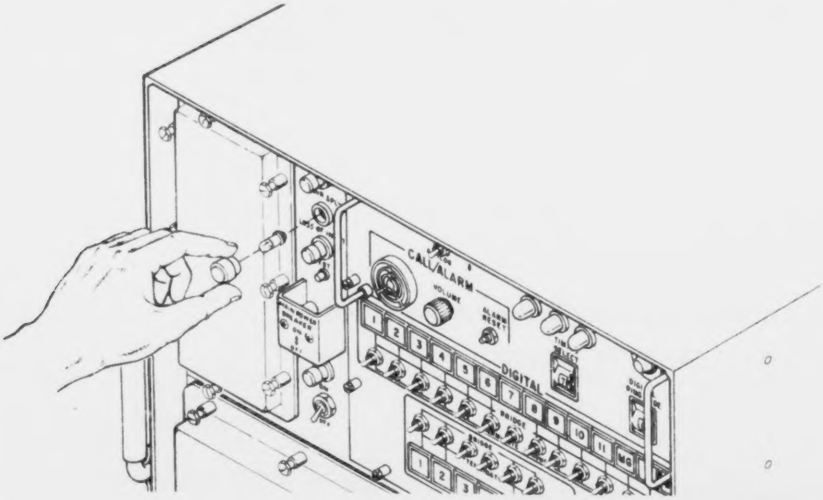
Section V. MAINTENANCE PROCEDURES

4-13. ORGANIZATIONAL MAINTENANCE

Organizational corrective maintenance of the OCU-II consists of removing and replacing those items found to be defective during troubleshooting. These procedures are limited to removal and replacement of lamp bulbs, cover assemblies, control panel, filter, and circuit card assemblies.

4-14. REMOVAL AND REPLACEMENT OF FRONT PANEL LAMPS

The lamps for the SUMMARY, PWR SPLY, LOSS OF INPUT, and POWER lights are replaceable at the organizational maintenance level.


PWR SPLY
LOSS OF INPUT
CALL/ALARM
VOLUME
ALARM RESET
TIME SELECT
DIGITAL
BRIDGE
1
2
3
4
5
6
7
8
9
10
11
MG

EL9AS083

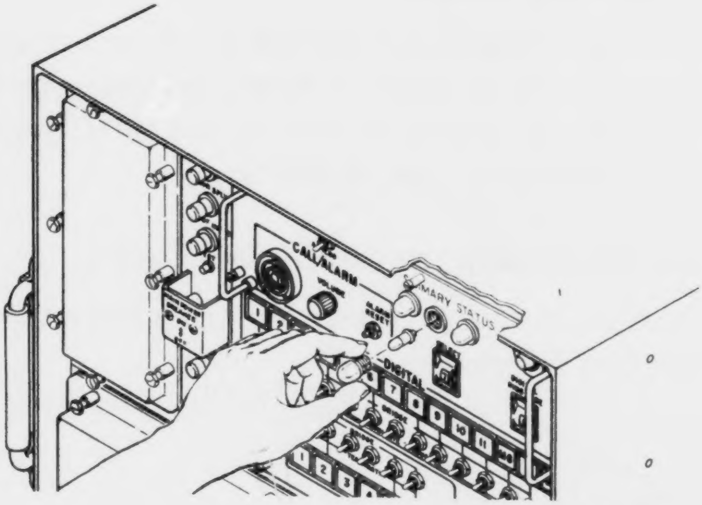
REMOVAL

1 Turn lens assembly counterclockwise and remove.
2 Pull lamp loose from lens assembly and remove.

REPLACEMENT

1 Press new lamp into lens assembly.
2 Reinstall lens assembly and turn clockwise to secure.

4-15. REMOVAL AND REPLACEMENT OF CONTROL PANEL SUMMARY STATUS LAMPS


CALL/ALARM
VOLUME
ALARM RESET
SUMMARY STATUS
DIGITAL

EL9AS084

REMOVAL

1 Turn lens assembly counterclockwise and remove.

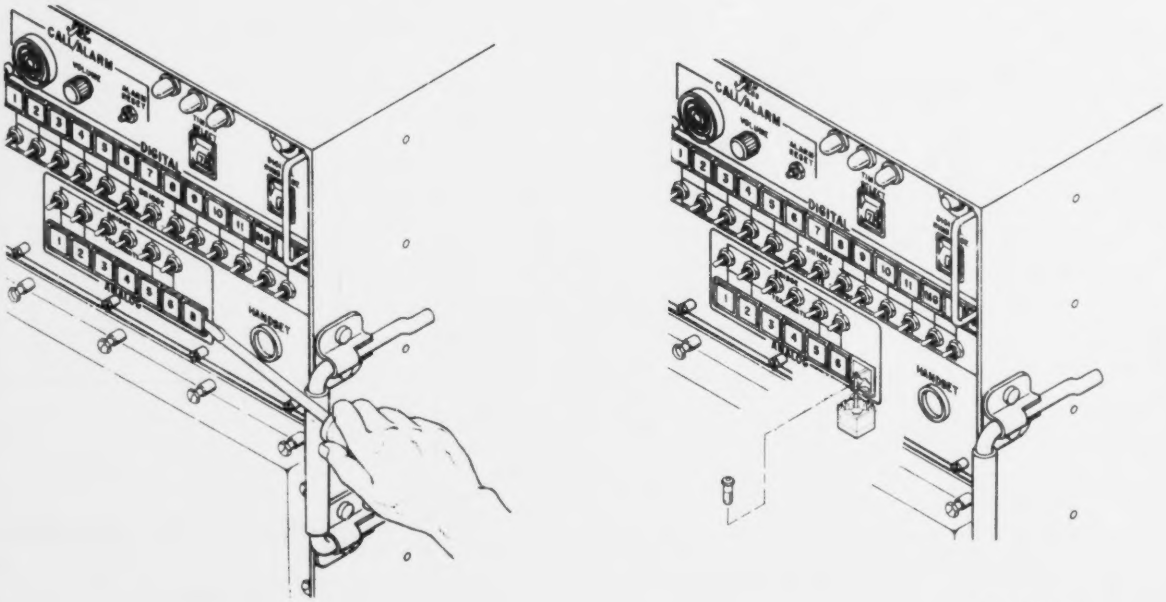
2 Pull lamp loose from lens assembly and remove.

REPLACEMENT

1 Press new lamp into lens assembly.

2 Reinstall lens assembly and turn clockwise to secure.

4-16. REMOVAL AND REPLACEMENT OF CONTROL PANEL ANALOG AND DIGITAL PUSH SWITCH LAMPS


CALL/ALARM
DIGITAL
HANDSET
CALL/ALARM
DIGITAL
HANDSET

EL9AS085

REMOVAL

1 Insert 3-inch blade screwdriver in slot on edge of lens and detach lens assembly from panel.

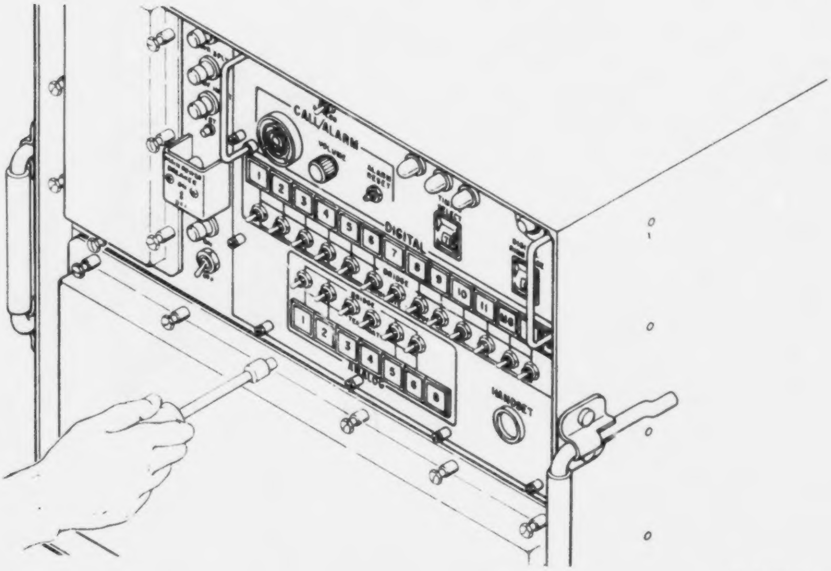
2 Pull lamp loose from assembly and remove.

REPLACEMENT

1 Press new lamp into lens assembly.

2 Orient lens assembly (surface marked TOP is up) and replace into panel by pressing until is snaps into place.

4-17. REMOVAL AND REPLACEMENT OF LOGIC CCA COMPARTMENT COVER ASSEMBLY


CALL/ALARM
VOLUME
DIGITAL
HANDSET

EL9AS086

REMOVAL

- Using 1/4-inch socket wrench, loosen 18 captive screws securing CCA cover assembly and remove cover.

REPLACEMENT

- Install CCA cover assembly and secure 18 captive screws. Do not overtighten.

4-18. REMOVAL AND REPLACEMENT OF LOGIC CCAs

CAUTION

Static discharge can damage microcircuit components on CCAs. To avoid this damage, observe the following:

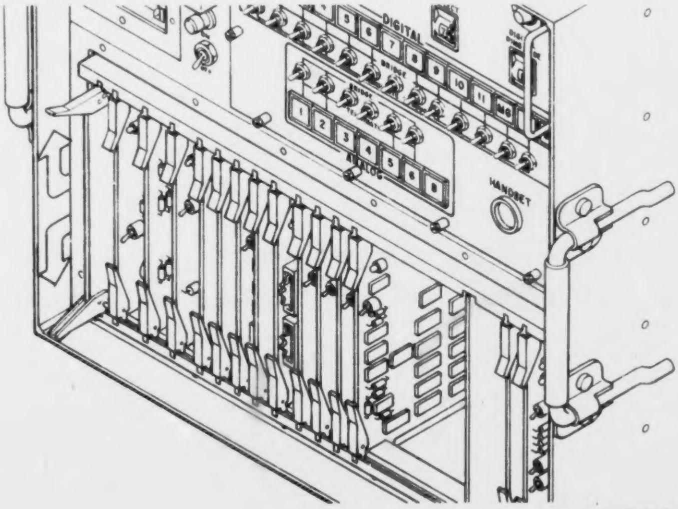
(1) Handle CCAs by their edges only.

(2) Do not wrap, store, or ship CCAs in plastic bags; use containers made of heavy paper or aluminum foil.

(3) Do not rub CCAs against clothing or wipe with a cloth made with synthetic fibers (plastic, acrylic, nylon, etc.).

PRELIMINARY PROCEDURES

- Remove logic CCA compartment cover (see paragraph 4-17).

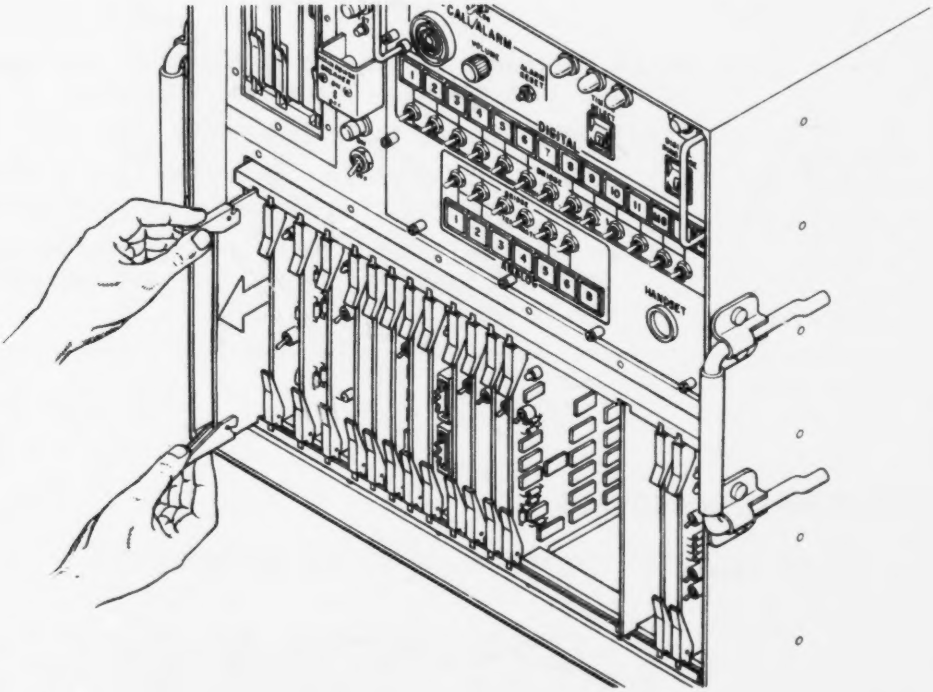


EL9AS087

REMOVAL

1 Swing out both levers on card at the same time to disengage card from connector.

4-18. REMOVAL AND REPLACEMENT OF LOGIC CCAs—Continued


CALL/ALARM
VOLUME
ALARM RESET
DIGITAL
HANDSET
EL9AS088

2 Carefully pull out card.

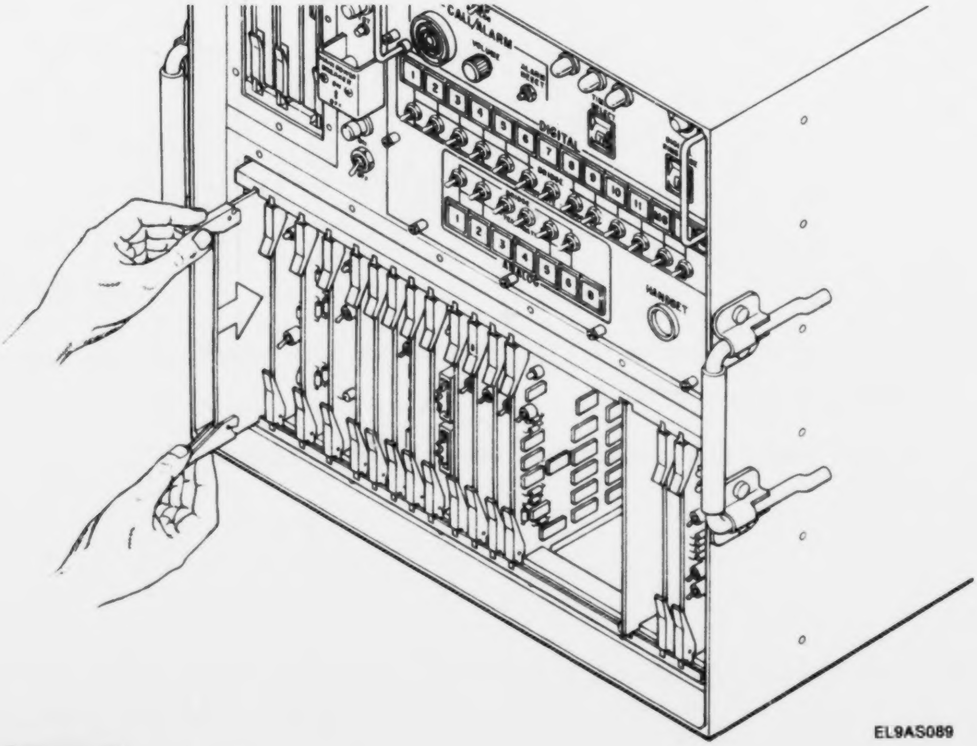
3 Note positions of any CCA switches.

4 Set any switches on replacement CCA to positions noted on removed CCA.

4-18. REMOVAL AND REPLACEMENT OF LOGIC CCAs—Continued

CAUTION

Damage will result if excessive force is used to insert cards. If cards cannot be inserted with reasonable force, insure card identification on card extractor matches that on slot. Insure that levers are straight out before insertion.

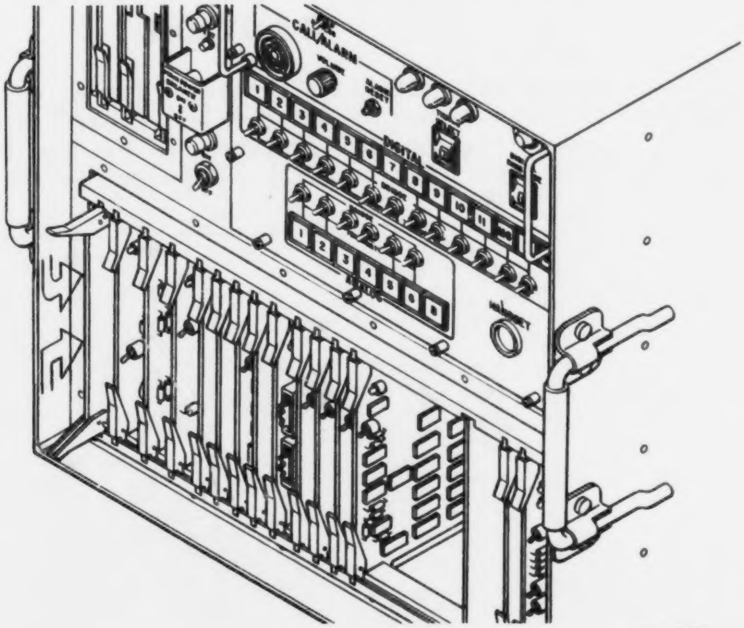

CALL/ALARM
VOLUME
ALARM RESET
DIGITAL
1
2
3
4
5
6
7
8
9
10
11
ANALOG
1
2
3
4
5
6
HANDSET

EL9AS089

REPLACEMENT

1 Aline card in slot and carefully push in. As card begins to engage, levers will begin to move in.

4-18. REMOVAL AND REPLACEMENT OF LOGIC CCAs—Continued

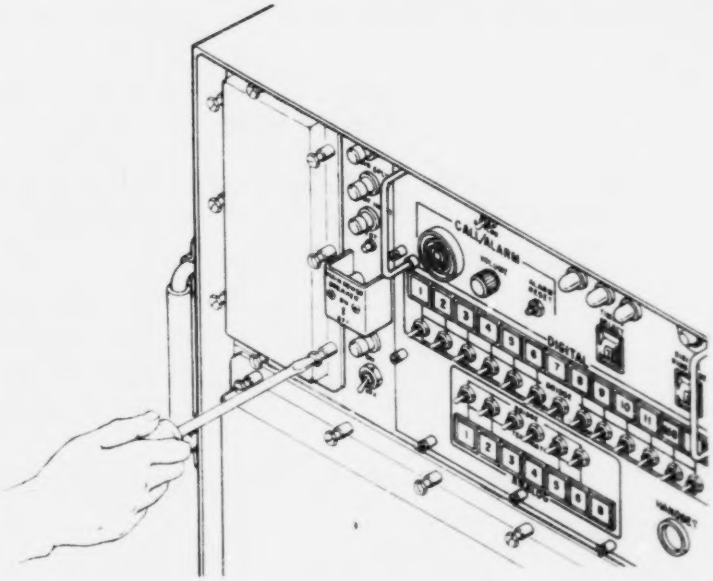

CALL/ALARM
DIGITAL
1
2
3
4
5
6
7
8
9
10
11
1
2
3
4

EL9AS090

2 When card is properly in place, swing in both levers at the same time to engage card in connector.

3 Replace logic CCA compartment cover (see paragraph 4-17).

4-19. REMOVAL AND REPLACEMENT OF POWER SUPPLY CCA COMPARTMENT COVER ASSEMBLY


CALL/ALARM
ALARM RESET
DIGITAL
1
2
3
4
5
6
7
8
9
10
11
1
2
3
4
5
6
8
HANDSET

EL9AS091

REMOVAL

- Using a flat blade screwdriver, loosen eight captive screws securing CCA assembly and remove cover.

REPLACEMENT

- Install CCA cover assembly and secure eight captive screws. Do not overtighten.

4-20. REMOVAL AND REPLACEMENT OF POWER SUPPLY CCAs

WARNING

HIGH VOLTAGE

The high voltage used in this equipment can kill on contact. Ground the equipment. Avoid the 115-volt ac input. Do not service alone. Where possible, use one hand to service.

CAUTION

Static discharge can damage microcircuit components on CCAs. To avoid this damage, observe the following:

(1) Handle CCAs by their edges only.

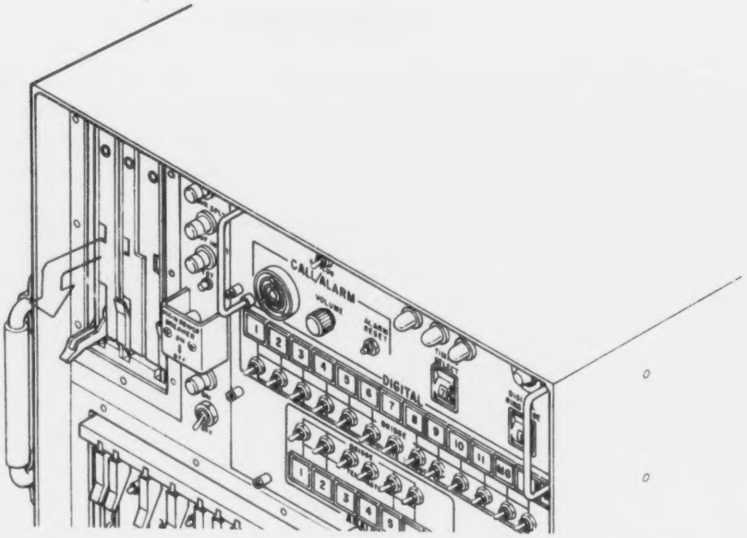
(2) Do not wrap, store, or ship CCAs in plastic bags; use containers made of heavy paper or aluminum foil.

(3) Do not rub CCAs against clothing or wipe with a cloth made with synthetic fibers (plastic, acrylic, nylon, etc.).

PRELIMINARY PROCEDURES

- Set front panel POWER ON/OFF switch to OFF.
- Remove power supply CCA compartment cover (see paragraph 4-19).

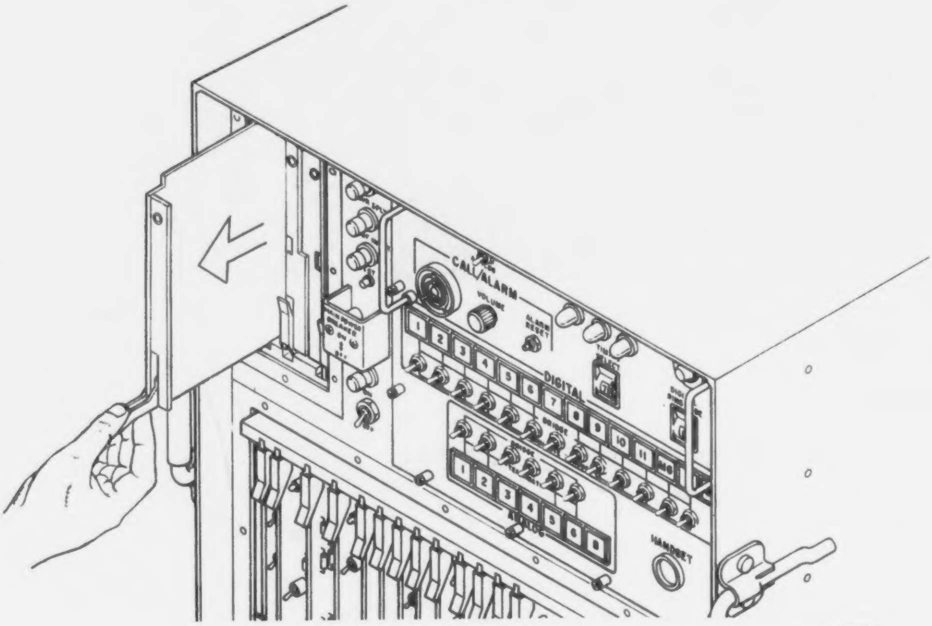
4-20. REMOVAL AND REPLACEMENT OF POWER SUPPLY CCAs—Continued


CALL/ALARM
VOLUME
ALARM RESET
DIGITAL
1
2
3
4
5
6
7
8
9
10
11
MG
1
2
3
4
5

EL9AS092

REMOVAL

1 Swing out lever on bottom of card to disengage card from connector.


CALL/ALARM
VOLUME
ALARM RESET
DIGITAL
1
2
3
4
5
6
7
8
9
10
11
MG
1
2
3
4
5
6
ANALOG
HANDSET

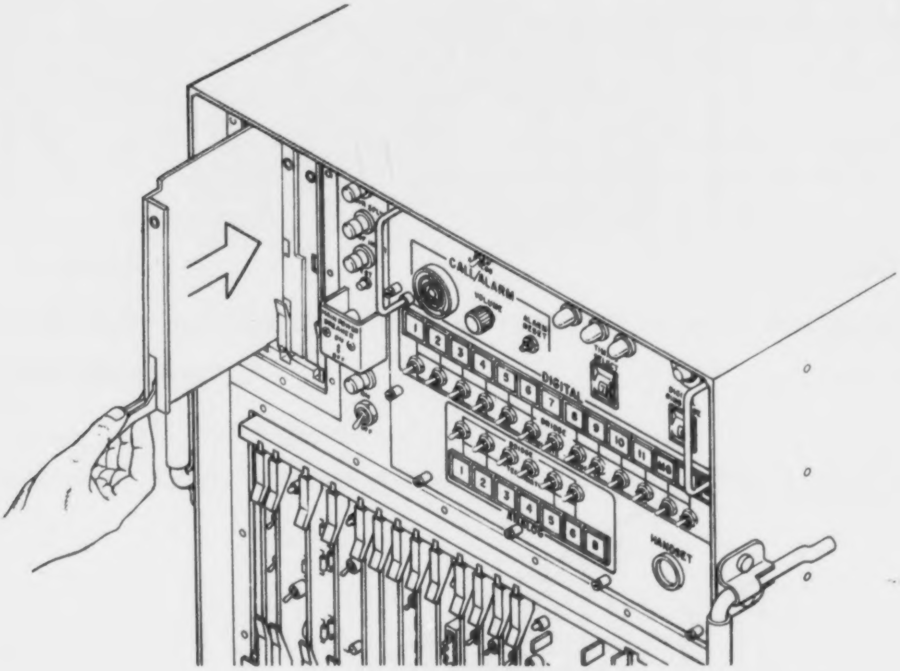
EL9AS093

2 Carefully pull out card.

4-20. REMOVAL AND REPLACEMENT OF POWER SUPPLY CCAs—Continued

CAUTION

Damage will result if excessive force is used to insert cards. If cards cannot be inserted with reasonable force, insure card identification on red anodized frame matches that on slot. Insure that levers are straight out before insertion.

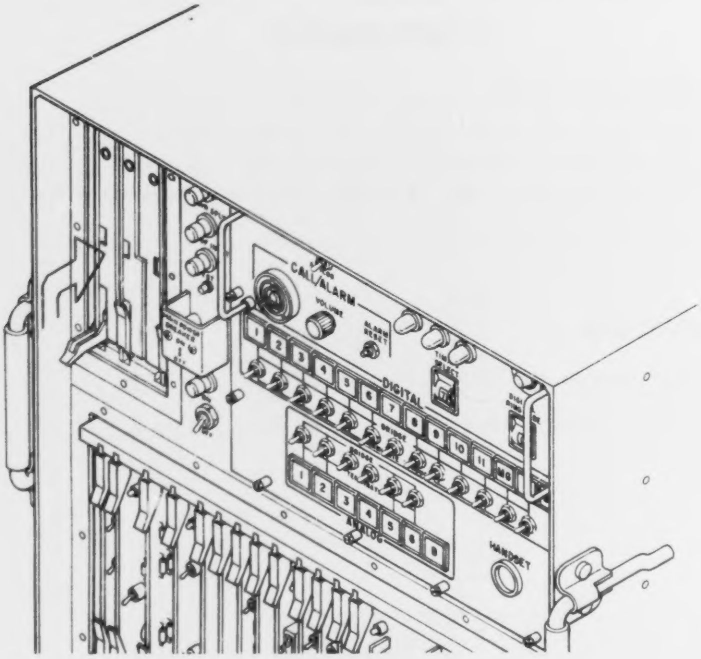


EL9AS094

REPLACEMENT

1 Aline card in slot and carefully push in.

4-20. REMOVAL AND REPLACEMENT OF POWER SUPPLY CCAs—Continued


CALL/ALARM
VOLUME
ALARM RESET
DIGITAL
1
2
3
4
5
6
7
8
9
10
11
MG
BRIDGE
ANALOG
1
2
3
4
5
6
HANDSET

EL9AS095

2 Insure CCA is properly seated, then swing in lever.

3 Replace power supply CCA compartment cover (see paragraph 4-19).

4 Set front panel POWER ON/OFF switch to ON.

4-21. REMOVAL AND REPLACEMENT OF FILTER ASSEMBLY

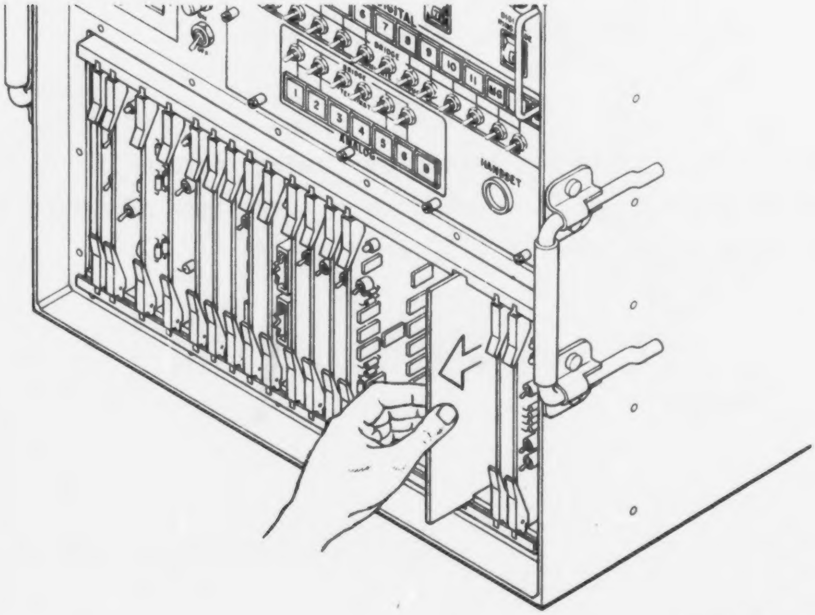
WARNING

HIGH VOLTAGE

The high voltage used in this equipment can kill on contact. Ground the equipment. Avoid the 115-volt ac input. Do not service alone. Where possible, use one hand to service.

PRELIMINARY PROCEDURE

- Set front panel POWER ON/OFF switch to OFF.
- Remove logic CCA compartment cover (see paragraph 4-17).



EL9AS096

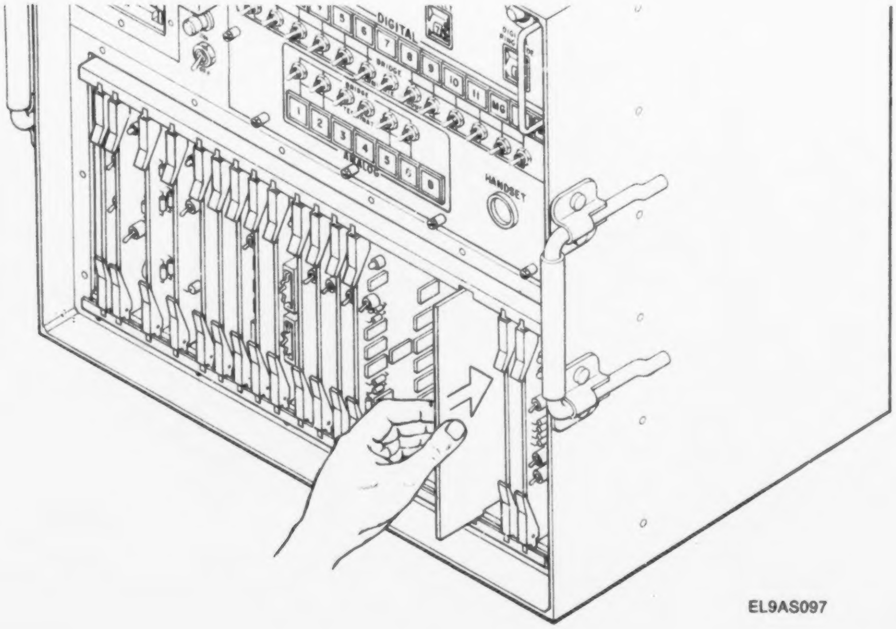
REMOVAL

1 Carefully grasp CCA edge and pull out of slot.

4-21. REMOVAL AND REPLACEMENT OF FILTER ASSEMBLY—Continued

CAUTION

Damage will result if excessive force is used to insert cards.


DIGITAL
BRIDGE
ANALOG
HANDSET
MG
1
2
3
4
5
6
7
8
9
10
11

EL9AS097

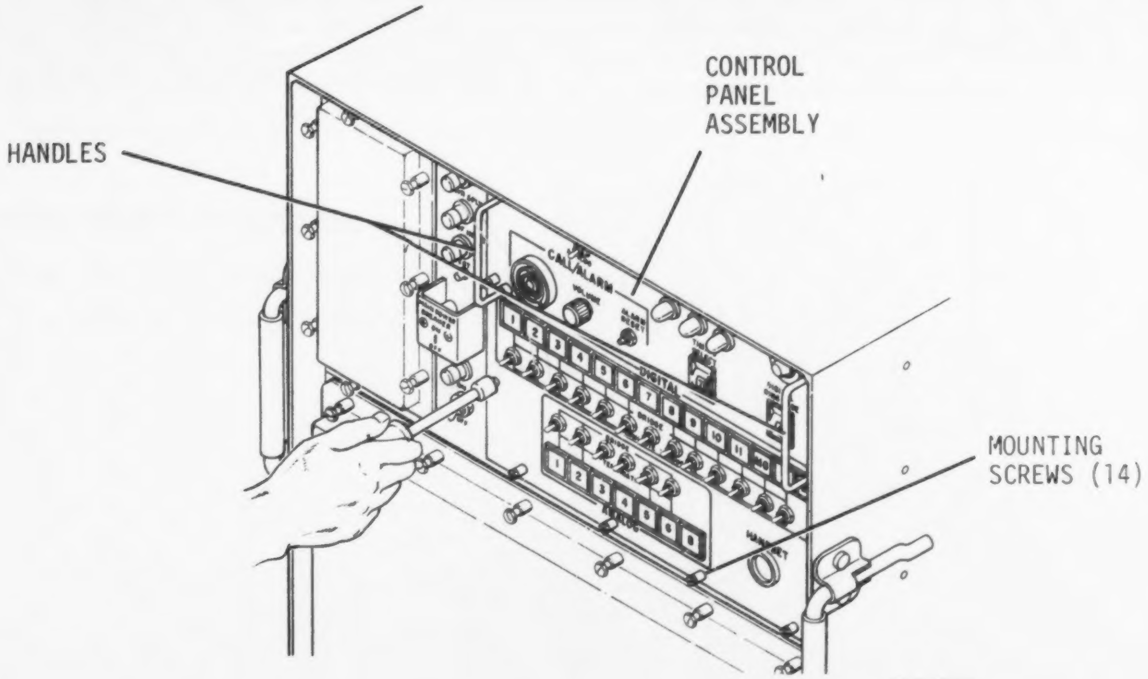
REPLACEMENT

1 Aline card in slot and carefully push in.

2 Replace logic CCA compartment cover (see paragraph 4-17).

3 Set front panel POWER ON/OFF switch to ON.

4-22. REMOVAL AND REPLACEMENT OF CONTROL PANEL ASSEMBLY

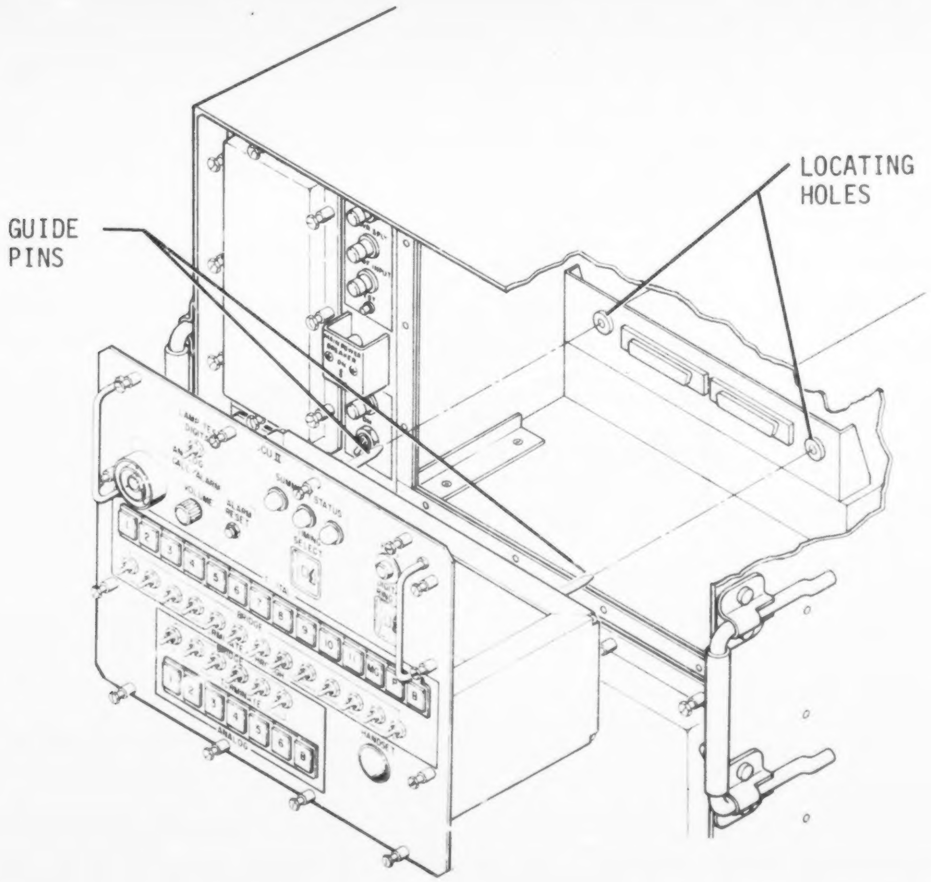

CONTROL
PANEL
ASSEMBLY
HANDLES
MOUNTING
SCREWS (14)
CALL/ALARM
DIGITAL
EL9AS098

REMOVAL

1 Using 1/4-inch socket wrench, loosen 14 screws on control panel assembly.

2 Grasp two handles and, while carefully pulling straight out, unseat and remove the panel.

4-22. REMOVAL AND REPLACEMENT OF CONTROL PANEL ASSEMBLY—Continued

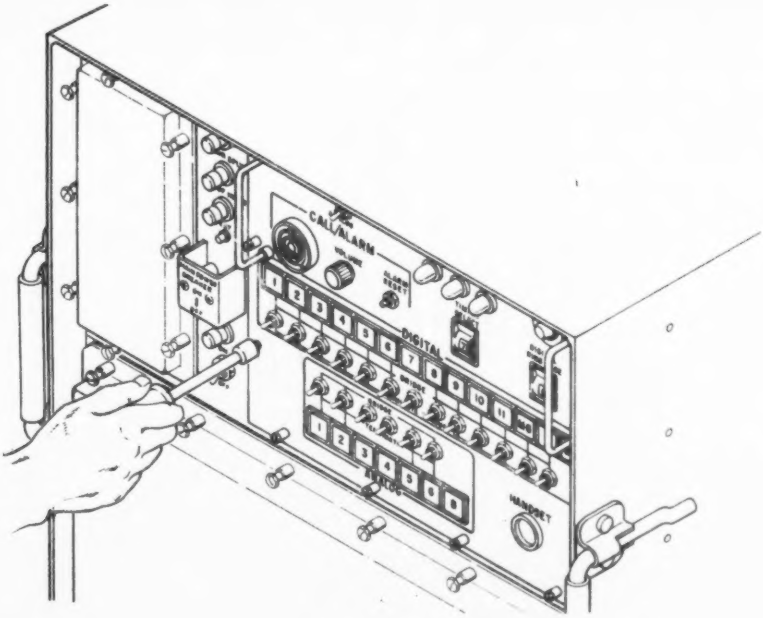


EL9AS099

REPLACEMENT

1 Position replacement control panel assembly carefully into opening so as to engage locating holes on connector shield plate with guide pins on the control panel assembly plate.

4-22. REMOVAL AND REPLACEMENT OF CONTROL PANEL ASSEMBLY—Continued


CALL/ALARM
VOLUME
ALARM RESET
1
2
3
4
5
6
7
8
9
10
11
DIGITAL
BRIDGE
1
2
3
4
5
6
ANALOG
HANDSET

EL9AS100

2 Carefully press control panel assembly in until connectors on the connector shield plate are fully engaged with the mating connectors on the control assembly plate and fasten control panel assembly by using 1/4-inch socket wrench to tighten 14 panel screws. Do not overtighten.

APPENDIX A
REFERENCES

A-1. SCOPE

This appendix lists all forms, technical publications, and miscellaneous publications referenced in the manual.

A-2. FORMS

Technical Order System Publication Improvement Report and Reply	AFTO Form 22
Recommended Changes to Publications and Blank Forms	DA Form 2028
Recommended Changes to Equipment Technical Publications	DA Form 2028-2
Equipment Inspection and Maintenance Worksheet	DA Form 2404
Discrepancy in Shipment Report (DISREP)	SF-361
Report of Discrepancy (ROD)	SF-364
Material Deficiency Report (Category 1)	DA Form 173
Quality Deficiency Report (Category 2)	SF-368

A-3. TECHNICAL MANUALS

Procedures for Destruction of Electronic Materiel to Prevent Enemy Use (Electronics Command)	TM 750-244-2
Organizational, Direct Support, and General Support Maintenance Repair Parts and Special Tools Lists (Including Depot Maintenance Repair Parts and Special Tools) for Orderwire Control C-10717/TRC (NSN 5820-01-145-4907)	TM 11-5085-726-24P

A-4. REGULATIONS

Report of Transportation Discrepancies in Shipments	AR 55-38
Reporting of Item and Packaging Discrepancies	AR 735-11-2

A-5. MISCELLANEOUS PUBLICATIONS

Expendable Items (Except Medical, Class V, Repair Parts, and Heraldic Items)	CTA 50-970
Consolidated Index of Army Publications and Blank Forms	DA Pam 310-1
The Army Maintenance Management System (TAMMS)	DA Pam 738-750
Federal Supply Code for Manufacturers (FSCM)	SB 708-42
Maintenance and Repair of Printed Circuit Boards and Printed Wiring Assemblies	TB 43-0127

APPENDIX B
MAINTENANCE ALLOCATION

Section I. INTRODUCTION

B-1. GENERAL

a. This section provides a general explanation of all maintenance and repair functions authorized at various maintenance categories.

b. The Maintenance Allocation Chart (MAC) in Section II designates overall authority and responsibility for the performance of maintenance functions on the identified end item or component. The application of the maintenance functions to the end item or component will be consistent with capacities and capabilities of the designated maintenance categories.

c. Section III lists the tools and test equipment (both special tools and common tool sets) required for each maintenance function as referenced from Section II.

d. Section IV contains supplemental instructions and explanatory notes for a particular maintenance function.

B-2. MAINTENANCE FUNCTIONS

Maintenance functions will be limited to and defined as follows:

a. Inspect. To determine the serviceability of an item by comparing its physical, mechanical, and/or electrical characteristics with established standards through examination (e.g., by sight, sound, or feel).

b. Test. To verify serviceability by measuring the mechanical, pneumatic, hydraulic, or electrical characteristics of an item and comparing those characteristics with prescribed standards.

c. Service. Operations required periodically to keep an item in proper operating condition, i.e., to clean (includes decontaminate, when required), to preserve, to drain, to paint, or to replenish fuel, lubricants, chemical fluids, or gases.

d. Aline. To adjust specified variable elements of an item to bring about optimum or desired performance.

e. Calibrate. To determine and cause corrections to be made or to be adjusted on instruments or test measuring and diagnostic equipments used in precision measurement. Consists of comparisons of two instruments, one of which is a certified standard of known accuracy, to detect and adjust any discrepancy in the accuracy of the instrument being compared.

B-2. MAINTENANCE FUNCTIONS—Continued

f. Remove/Install. To remove and install the same item when required to perform service or other maintenance functions. Install may be the act of emplacing, seating, or fixing into position a spare, repair part, or module (component or assembly) in a manner to allow proper functioning of an equipment or system.

g. Replace. To remove an unserviceable item and install a serviceable counterpart in its place. "Replace" is authorized by the MAC and is shown as the third position code of the SMR code.

h. Repair. The application of maintenance services including fault location/troubleshooting removal/installation and disassembly/assembly procedures, and maintenance actions to identify troubles and restore serviceability to an item by correcting specific damage, fault, malfunction, or failure in a part, subassembly, module (component or assembly), end item, or system.

i. Overhaul. That maintenance effort (service/action) prescribed to restore an item to a completely serviceable/operational condition as required by maintenance standards in appropriate technical publications (i.e., DMWR). Overhaul is normally the highest degree of maintenance performed by the Army. Overhaul does not normally return an item to like-new condition.

j. Rebuild. Consists of those services/actions necessary for the restoration of unserviceable equipment to a like-new condition in accordance with original manufacturing standards. Rebuild is the highest degree of material maintenance applied to Army equipment. The rebuild operation includes the act of returning to zero those age measurements (hours/miles, etc.) considered in classifying Army equipment/components.

B-3. EXPLANATION OF COLUMNS IN THE MAC, SECTION II

a. Column 1, Group Number. This column lists functional group code numbers, the purpose of which is to identify maintenance significant components, assemblies, subassemblies, and modules with the next higher assembly. End item group number shall be "00".

b. Column 2, Component/Assembly. This column contains the names of components, assemblies, subassemblies, and modules for which maintenance is authorized.

c. Column 3, Maintenance Function. This column lists the functions to be performed on the item listed in column 2. (For detailed explanation of these functions, see paragraph B-2.)

d. Column 4, Maintenance Category. This column specifies, by the listing of a work time figure in the appropriate subcolumn(s), the category of maintenance authorized to perform the function listed in column 3. This figure represents the active time required to perform that maintenance function at the indicated category of maintenance. If the number or complexity of the tasks within the listed maintenance function vary at different maintenance categories, appropriate work time

B-3. EXPLANATION OF COLUMNS IN THE MAC, SECTION II—Continued

figures will be shown for each category. The work time figure represents the average time required to restore an item (assembly, subassembly, component, module, end item, or system) to a serviceable condition under typical field operating conditions. This time includes preparation time (including any necessary disassembly/assembly time), troubleshooting/fault location time, and quality assurance/quality control time in addition to the time required to perform the specific tasks identified for the maintenance functions authorized in the maintenance allocation chart. The symbol designations for the various maintenance categories are as follows:

C .... Operator or Crew
O .... Organizational Maintenance
F .... Direct Support Maintenance
H .... General Support Maintenance
D .... Depot Maintenance

e. Column 5, Tools and Equipment. This column specifies, by code, those common tool sets (not individual tools) and special tools, TMDE, and support equipment required to perform the designated function.

f. Column 6, Remarks. This column shall, when applicable, contain a letter code, in alphabetic order, which shall be keyed to the remarks contained in Section IV.

B-4. EXPLANATION OF COLUMNS IN TOOL AND TEST EQUIPMENT REQUIREMENTS, SECTION III

a. Column 1, Reference Code. The tool and test equipment code correlates with a code used in the MAC, Section II, column 5.

b. Column 2, Maintenance Category. The lowest category of maintenance authorized to use the tool or test equipment.

c. Column 3, Nomenclature. Name or identification of the tool or test equipment.

d. Column 4, National Stock Number. The National Stock Number of the tool or test equipment.

e. Column 5, Tool Number. The manufacturer's part number.

B-5. EXPLANATION OF COLUMNS IN REMARKS, SECTION IV

a. Column 1, Reference Code. The code recorded in column 6, Section II.

b. Column 2, Remarks. This column lists information pertinent to the maintenance function being performed as indicated in the MAC, Section II.

Section II. MAINTENANCE ALLOCATION CHART FOR MODEM, CABLE DRIVER MD-1025/G

GROUP NUMBER	COMPONENT ASSEMBLY	MAINTENANCE FUNCTION	MAINTENANCE CATEGORY					TOOLS AND TE	REMARKS
			C	O	F	H	D		
00	CONTROL, ORDERWIRE C-10717/TRC (PN SM-D-959045)	INSPECT		2.00				10	A
		SERVICE		0.10				10	B
		REPAIR		4.10				09, 10	C
		INSPECT			1.00			11	A
		TEST			2.00			03, 11	D
		REPAIR			3.10			03, 11	E
		INSPECT				1.10		11	A
		TEST				3.50		02, 03, 04, 05, 11	H
		REPAIR				24.20		02, 03, 04, 05, 06, 11	G
		OVERHAUL					47.80	02, 03, 04, 05, 06, 07, 08, 09, 11, 13, 18, 20, 24, 27, 43, 47	F
01	AC INPUT CCA (PN SM-D-884579)	INSPECT		0.10				10	OT1
		REPLACE		0.20				10	OT2
		INSPECT				0.10		--	HT1
		TEST				0.30		02, 03, 05	HT3
		REPAIR				1.20		02, 03, 05, 06, 11	HT2
02	MULTI VDC CCA (PN SM-D-884567)	INSPECT		0.10				10	OT1
		REPLACE		0.20				10	OT2
		INSPECT				0.10		--	HT1
		TEST				0.30		02, 03, 05	HT3
		REPAIR				1.20		02, 03, 05, 06, 11	HT2
03	52 VDC CCA (PN SM-D-884571)	INSPECT		0.10				10	OT1
		REPLACE		0.20				10	OT2
		INSPECT				0.10		--	HT1
		TEST				0.30		02, 03, 05	HT3
		REPAIR				1.20		02, 03, 05, 06, 11	HT2

Section II. MAINTENANCE ALLOCATION CHART—Continued

GROUP NUMBER	COMPONENT ASSEMBLY	MAINTENANCE FUNCTION	MAINTENANCE CATEGORY					TOOLS AND TE	REMARKS
			C	O	F	H	D		
04	BITE 3 CCA (PN SM-D-959105)	INSPECT		0.10				10	OT1
		REPLACE		0.20				10	OT2
		INSPECT				0.10		--	HT1
		TEST				0.30		03, 04, 05	HT3
		REPAIR				2.20		03, 04, 05, 06, 11	HT2
05	ANALOG SIGNAL CCA (PN SM-D-959072)	INSPECT		0.10				10	OT1
		REPLACE		0.20				10	OT2
		INSPECT					0.10	--	DT1
		TEST					0.30	02, 03, 05	DT11
		REPAIR					1.20	02, 03, 05, 06, 11	DT10
06	ANALOG BRIDGE CCA (PN SM-D-959075)	INSPECT		0.10				10	OT1
		REPLACE		0.20				10	OT2
		INSPECT				0.10		--	HT1
		TEST				0.30		02, 03, 05	HT3
		REPAIR				2.20		02, 03, 05, 06, 11	HT2
07	ANALOG XMTR AMPLIFIER CCA (PN SM-D-959069)	INSPECT		0.10				10	OT1
		REPLACE		0.20				10	OT2
		INSPECT				0.10		--	HT1
		TEST				0.30		02, 03, 05	HT3
		REPAIR				2.20		02, 03, 05, 06, 11	HT2
08	INTERFACE OW CCA (PN SM-D-959090)	INSPECT		0.10				10	OT1
		REPLACE		0.20				10	OT2
		INSPECT					0.10	--	DT1
		TEST					0.40	03, 04, 05	DT5
		REPAIR					3.70	03, 04, 05, 06, 11	DT4
09	GROUP FRAMING CCA (PN SM-D-986250)	INSPECT		0.10				10	OT1
		REPLACE		0.20				10	OT2
		INSPECT				0.10		--	HT1
		TEST				0.30		03, 04, 05	HT3
		REPAIR				2.20		03, 04, 05, 06, 11	HT2

Section II. MAINTENANCE ALLOCATION CHART—Continued

GROUP NUMBER	COMPONENT ASSEMBLY	MAINTENANCE FUNCTION	MAINTENANCE CATEGORY					TOOLS AND TE	REMARKS
			C	O	F	H	D		
10	MUX/DEMUX CCA	INSPECT		0.10				10	OT1
	(PN SM-D-959087)	REPLACE		0.20				10	OT2
		INSPECT					0.10	--	DT1
		TEST					0.30	03, 04, 05	DT5
		REPAIR					1.20	03, 04, 05, 06, 11	DT4
11	VINSON BUFFER/RING DETECTOR CCA	INSPECT		0.10				10	OT1
	(PN SM-D-959093)	REPLACE		0.20				10	OT2
		INSPECT				0.10		--	HT1
		TEST				0.40		03, 04, 05	HT3
		REPAIR				3.70		03, 04, 05, 06, 11	HT2
12	TIMING SOURCE CCA	INSPECT		0.10				10	OT1
	(PN SM-D-959290)	REPLACE		0.20				10	OT2
		INSPECT				0.10		--	HT1
		TEST				0.30		02, 03, 05	HT3
		REPAIR				2.20		02, 03, 05, 06, 11	HT2
13	DIGITAL BRIDGE CCA	INSPECT		0.10				10	OT1
	(PN SM-D-959096)	REPLACE		0.20				10	OT2
		INSPECT					0.10	--	DT1
		TEST					0.30	03, 04, 05	DT5
		REPAIR					1.20	03, 04, 05, 06, 11	DT4
14	DATA CHANNEL MUX CCA	INSPECT		0.10				10	OT1
	(PN SM-D-959078)	REPLACE		0.20				10	OT2
		INSPECT					0.10	--	DT1
		TEST					0.30	02, 03, 05	DT5
		REPAIR					1.20	02, 03, 05, 06, 11	DT4
15	LAMP DRIVER/RING GENERATOR CCA	INSPECT		0.10				10	OT1
	(PN SM-D-959286)	REPLACE		0.20				10	OT2
		INSPECT				0.10		--	HT1
		TEST				0.30		03, 04, 05	HT3
		REPAIR				2.20		03, 04, 05, 06, 11	HT2
16	ALARM INTERFACE CCA	INSPECT		0.10				10	OT1
	(PN SM-D-959108)	REPLACE		0.20				10	OT2
		INSPECT					0.10	--	DT1
		TEST					0.30	03, 04, 05	DT5
		REPAIR					2.20	03, 04, 05, 06, 11	DT4
17	TELEMETRY COMBINER/GENERATOR CCA	INSPECT		0.10				10	OT1
	(PN SM-D-959084)	REPLACE		0.20				10	OT2
		INSPECT				0.10		--	HT1
		TEST				0.40		03, 04, 05	HT3
		REPAIR				3.70		03, 04, 05, 06, 11	HT2

Section II. MAINTENANCE ALLOCATION CHART—Continued

GROUP NUMBER	COMPONENT ASSEMBLY	MAINTENANCE FUNCTION	MAINTENANCE CATEGORY					TOOLS AND TE	REMARKS
			C	O	F	H	D		
18	CONTROL PANEL ASSEMBLY (PN SM-D-959124)	INSPECT		0.10				10	OT1
		REPAIR		0.30				09, 10	OT3
		REPLACE		0.20				10	OT4
		INSPECT			0.20			11	FT1
		TEST			0.20			03, 09, 11	FT2
		REPAIR			0.20			03, 11	FT3
		INSPECT					0.20	11	DT1
		TEST					0.50	03, 06, 09, 11	DT2
		REPAIR					1.40	03, 11	DT3
1801	CONTROL PANEL LOGIC CCA (PN SM-D-959064)	INSPECT			0.10			11	FT1
		INSPECT					0.10		DT1
		TEST					0.30	02, 03, 05	DT5
		REPAIR					1.20	02, 03, 05, 06, 11	DT4
		REPLACE					0.20	11	DT6
19	CASE ASSEMBLY, ELECTRICAL EQPT. (PN SM-D-959111)	INSPECT		0.10				10	OT1
		REPAIR		0.20				10	OT2
		INSPECT			0.70			11	FT1
		TEST			0.80			03, 09, 11	FT2
		REPAIR			2.10			03, 11	FT3
		INSPECT					0.70	11	DT1
		TEST					2.00	03, 11	DT2
		REPAIR					5.40	03, 06, 07, 08, 11	DT3
1901	ELECTRONIC COMPONENTS ASSEMBLY, A1 (PN SM-D-959114)	INSPECT			0.10			11	FT1
		INSPECT					0.10	11	DT1
		REPAIR					0.70	03, 06, 08, 11	DT3
		TEST					0.20	03, 11	DT2
1902	CONNECTOR ASSEMBLY, REAR (PN SM-D-959120)	INSPECT			0.10			11	FT1
		TEST			0.30			03, 09, 11	FT2
		REPAIR			0.80			03, 11	FT3
		REPLACE			0.40			11	FT4
		INSPECT					0.10	11	DT1
		TEST					0.30	03	DT2
		REPAIR					0.80	03, 06, 08, 11	DT3
1903	CONNECTOR ASSEMBLY, ELECTRICAL, A3 (PN SM-D-959113)	INSPECT			0.10			11	FT1
		INSPECT					0.10	11	DT1
		REPAIR					0.60	03, 06, 07, 08, 11	DT3
		TEST					0.30	03, 11	DT2
1904	CONNECTOR ASSEMBLY, POWER SUPPLY (PN SM-D-984809)	INSPECT			0.10			11	FT1
		INSPECT					0.10	11	DT1
		REPAIR					0.60	03, 06, 08, 11	DT3
		TEST					0.30	03, 11	DT2
1905	ELECTRONIC COMPONENTS ASSEMBLY, A5 (PN SM-D-959057)	INSPECT		0.10				10	OT1
		REPLACE		0.20				10	OT2
		INSPECT			0.10			11	FT1
		INSPECT					0.10	11	DT1
		REPAIR					0.70	03, 06, 08, 11	DT3
		TEST					0.20	03, 11	DT2
1906	ELECTRONIC COMPONENTS ASSEMBLY, A6 (PN SM-C-959117)	INSPECT			0.10			11	FT1
		INSPECT					0.10	11	DT1
		REPAIR					0.70	03, 06, 08, 11	DT3
		TEST					0.20	03, 11	DT2

Section III. TOOL AND TEST EQUIPMENT REQUIREMENTS FOR MODEM, CABLE DRIVER MD-1025/G

TOOL OR TEST EQUIPMENT REF. CODE	MAINTENANCE CATEGORY	NOMENCLATURE	NATIONAL/NATO STOCK NUMBER
02	H, D	TEST STATION, ELECTRONIC EQUIPMENT, AN/USM-410 (XE-3) WITH INTERFACE ADAPTERS	6625-00-614-9535
03	F, H, D	MULTIMETER DIGITAL AN/PSM-45**	6625-01-139-2512
04	H, D	DIGITAL CARD TESTER, AN/USM-465A WITH INTERFACE ADAPTERS	6625-01-126-2473
05	H, D	OSCILLOSCOPE, OS-261/U (TEK-475)	6625-00-127-0079
06	H, D	BENCH REPAIR FACILITY, PACE PRC-350C**	4940-00-031-4541
07	D	WIREWRAP TOOL, GARDNER DENVER, 14 x A2 W/SLEEVE, BIT AND UNWRAPPING TOOL FOR AWG 30 WIRE	---
08	D	CONTACT TOOL KIT***	---
09	O, F, D	BITE CAPABILITY	---
10	O	TOOL KIT, ELECTRONIC EQUIPMENT, TK-101/G	5180-00-064-5178
11	H, F, D	TOOL KIT, ELECTRONIC EQUIPMENT, TK-105/G*	5180-00-610-8177
13	D	TRANSMISSION TEST SET HP-3551A	6625-01-062-0176
18	D	DSVT SIMULATOR	
20	D	TIMING SOURCE SDG 210793	
24	D	FREQUENCY COUNTER, TD-1255(V)1/U, (HP-5340A)	6625-00-498-8946
27	D	TRACKING GENERATOR, SG-1122/U, (HP-8443A)	6625-00-155-5990
43	D	TEST BREAKOUT BOX	
47	D	BREAKOUT TEST CABLES	
		*ITEM 11, ADDITIONAL HAND TOOLS REQUIRED, NOT SUPPLIED IN TK-105/G:	
		SOCKET WRENCH SET	5120-00-542-5799
		OPEN-END WRENCH, 1/2"	5120-00-187-7124
		OPEN-END WRENCH, 3/4"	5120-00-277-9517
		EL. CONN PLIERS, 9"	5120-00-624-8065
		SOCKET WRENCH, 1/8"	5120-00-974-6361
		INSERTION/REMOVAL TOOL (NAS 1664-20)	
		**OR AIR FORCE EQUIVALENT	
		***ITEM 8, CONNECTOR TOOLS REQUIRED:	
		CRIMPING TOOL M22520/1-01	5120-00-165-3912
		LOCATOR TOOL M22520/1-02	5120-00-016-6382
		INSERTION TOOL MS24256A20	
		EXTRACTOR TOOL MS24256R20	
		CRIMPING TOOL AMP #90345-1	
		EXTRACTOR TOOL AMP #91052-1	
		CRIMPING TOOL M22520/2-01	
		LOCATOR TOOL M22520/2-08	
		INSERTION/EXTRACTOR TOOL CEIT 20 HD	
		CRIMPING TOOL AMP #91403-1	
		CRIMPING TOOL MS3191-1	
		LOCATOR TOOL AMP #494-8-1	
		INSERTION/EXTRACTOR TOOL AMP #494-1	

Section IV. REMARKS FOR MODEM, CABLE DRIVER MD-1025/G

REF CODE	TASK	REMARKS
		UNIT LEVEL MAINTENANCE TASKS (DETAILED)
A	INSPECT	VISUALLY INSPECT UNIT/ASSEMBLY FOR EXTERNAL DAMAGE, CRACKS, CORROSION, ETC. USE AUTHORIZED TOOL KIT (TK-101/G OR TK-105/G).
B	SERVICE	SERVICE EXTERIOR UNIT - CLEAN, DUST, AND REMOVE DIRT, GREASE, FUNGUS, ETC., AS NECESSARY.
C	REPAIR	USING TK-101/G TOOL KIT, REMOVE COVER ASSEMBLY. FAULT LOCATE BY OBSERVING EACH CCA FOR AN ILLUMINATED LED (BITE INDICATION). TEST EXTERNAL LAMP CIRCUITS. CHECK SWITCHES FOR PROPER INDICATION AND FREEDOM OF MOVEMENT. REPAIR OF UNIT LIMITED TO REPLACEMENT OF LAMP BULBS AS REQUIRED. REPLACEMENT OF CCAs IS ADDRESSED AT LOWER INDENT.
D	TEST	USING TK-105/G TOOL KIT, INTERNAL BITE AND AUTHORIZED TEST EQUIPMENT, PERFORM LOOPBACK TESTS. CHECK FRONT PANEL CONTROLS AND INDICATORS AND MAKE APPROPRIATE CONTINUITY CHECKS.
E	REPAIR	REPAIR OF UNIT LIMITED TO REAR CONNECTOR ASSEMBLY COMPONENTS, USING TK-105/G TOOL KIT, AND REPLACEMENT OF DEFECTIVE CCAs. AFTER REPAIR, TEST UNIT USING INTERNAL BITE AND AUTHORIZED TEST EQUIPMENT.
F	OVERHAUL	OVERHAUL OF UNIT AT DEPOT CONSISTS OF THE INSPECTION, TEST, AND REPAIR/REPLACEMENT OF CASE ASSEMBLY MOUNTED COMPONENTS AND CONNECTOR ASSEMBLY COMPONENTS AND THE REPLACEMENT OF ALL CIRCUIT CARD ASSEMBLIES. THE OVERHAUL OF THIS UNIT MAY USE ALL AUTHORIZED TOOLS AND TEST EQUIPMENT INDICATED ON THIS MAC.
G	REPAIR	USING AN/USM-410 TEST STATION OR AN/USM-465A CARD TESTER AS INDICATED, AN/PSM-45 DIGITAL MULTIMETER AND OS-261/U OSCILLOSCOPE, FAULT LOCATE/TROUBLESHOOT CCA. THEN USING TK-105/G TOOL KIT AND PRC-350C BENCH REPAIR FACILITY, REPAIR CCA REPLACING FAULTY COMPONENTS. TEST ITEM AFTER REPAIR. NOTE: PAINT STRIPPER, ISOPROPYL ALCOHOL AND EPOXY MAY BE USED AS REQUIRED TO STRIP, CLEAN AND TOUCH UP AFFECTED AREAS OF THE CCA.
H	TEST	USING AN/USM-410 TEST STATION OR AN/USM-465A CARD TESTER AS INDICATED, AN/PSM-45 DIGITAL MULTIMETER AND OS-261/U OSCILLOSCOPE, TEST CCA.

Section IV. REMARKS—Continued

REF CODE	TASK	REMARKS
		ORGANIZATIONAL MAINTENANCE TASKS (DETAILED)
OT1	INSPECT	USING TK-101/G TOOL KIT AS REQUIRED, VISUALLY INSPECT CCA OR ASSEMBLY FOR BITE INDICATION, DAMAGE, DEFECTS, CRACKS, CORROSION, ETC.
OT2	REPLACE	USING TK-101/G TOOL KIT, REMOVE COVER ASSEMBLY AS NECESSARY, THEN REMOVE AND REPLACE FAULTY CCAs OR ASSEMBLIES AS REQUIRED.
OT3	REPAIR	USING TK-101/G TOOL KIT, REPLACE LAMPS AS NECESSARY.
OT4	REPLACE	USING TK-101/G TOOL KIT, REPLACE CONTROL PANEL ASSEMBLY.
		DIRECT SUPPORT MAINTENANCE TASKS (DETAILED)
FT1	INSPECT	USING TK-105/G TOOL KIT AS NECESSARY, VISUALLY INSPECT ASSEMBLY FOR EXTERNAL DAMAGE, CRACKS, CORROSION, ETC.
FT2	TEST	USING TK-105/G TOOL KIT AND AN/PSM-45 DIGITAL MULTIMETER AS NECESSARY, TEST ASSEMBLY MAKING CONTINUITY AND SHORTS MEASUREMENTS. PERFORM INTERNAL BITE CHECKS AS APPLICABLE.
FT3	REPAIR	USING AN/PSM-45 DIGITAL MULTIMETER, FAULT LOCATE ASSEMBLY, MAKING CONTINUITY AND SHORTS MEASUREMENTS. USING TK-105/G TOOL KIT, REPLACE FRONT PANEL COMPONENTS OR CONNECTORS AS REQUIRED. NOTE: REAR CONNECTOR ASSEMBLY REPAIR IS LIMITED TO REPLACEMENT OF MECHANICAL COMPONENTS, (i.e., HANDLES, GASKET MATERIAL, FIELD WIRE POSTS AND COAX CONNECTORS WHERE APPLICABLE).
FT4	REPLACE	USING TK-105/G TOOL KIT, REPLACE ASSEMBLY AS NECESSARY.
		SRA MAINTENANCE TASKS (DETAILED)
HT1	INSPECT	USING TK-105/G TOOL KIT AS NECESSARY, VISUALLY INSPECT ASSEMBLY FOR EXTERNAL DAMAGE, CRACKS, CORROSION, ETC.
HT2	REPAIR	USING AN/USM-410 TEST STATION OR AN/USM-465A CARD TESTER AS INDICATED, AN/PSM-45 DIGITAL MULTIMETER AND OS-261/U OSCILLOSCOPE, FAULT LOCATE/TROUBLESHOOT CCA. THEN USING TK-105/G TOOL KIT AND PRC-350C BENCH REPAIR FACILITY, REPAIR CCA REPLACING FAULTY COMPONENTS. TEST ITEM AFTER REPAIR. NOTE: PAINT STRIPPER, ISOPROPYL ALCOHOL, AND EPOXY MAY BE USED AS REQUIRED TO STRIP, CLEAN, AND TOUCH UP AFFECTED AREAS OF THE CCA.
HT3	TEST	USING AN/USM-410 TEST STATION OR AN/USM-465A CARD TESTER AS INDICATED, AN/PSM-45 DIGITAL MULTIMETER AND OS-261/U OSCILLOSCOPE, TEST CCA.
		DEPOT MAINTENANCE TASKS (DETAILED)
DT1	INSPECT	USING TK-105/G TOOL KIT AS NECESSARY, VISUALLY INSPECT ASSEMBLY FOR EXTERNAL DAMAGE, CRACKS, CORROSION, ETC. (REFER TO DMWR.)
DT2	TEST	USING AN/PSM-45 DIGITAL MULTIMETER, TEST ASSEMBLY MAKING CONTINUITY AND SHORTS MEASUREMENTS. (REFER TO DMWR.)
DT3	REPAIR	USING TK-105/G TOOL KIT, WIREWRAP TOOL, CONTACT TOOL KIT, PRC-350C BENCH REPAIR FACILITY, AND AN/PSM-45 DIGITAL MULTIMETER AS REQUIRED, REPAIR ASSEMBLY AS NECESSARY. (REFER TO DMWR.)
DT4	REPAIR	USING AN/USM-410 TEST STATION OR AN/USM-465A CARD TESTER AS INDICATED, AN/PSM-45 DIGITAL MULTIMETER AND OS-261/U OSCILLOSCOPE, FAULT LOCATE/TROUBLESHOOT CCA. THEN USING TK-105/G TOOL KIT AND PRC-350C BENCH REPAIR FACILITY, REPAIR CCA REPLACING FAULTY COMPONENTS. TEST ITEM AFTER REPAIR. NOTE: PAINT STRIPPER, ISOPROPYL ALCOHOL, AND EPOXY MAY BE USED AS REQUIRED TO STRIP, CLEAN, AND TOUCH UP AFFECTED AREAS OF THE CCA.
DT5	TEST	USING AN/USM-410 TEST STATION OR AN/USM-465A CARD TESTER AS INDICATED, AN/PSM-45 DIGITAL MULTIMETER AND OS-261/U OSCILLOSCOPE, TEST CCA.
DT6	REPLACE	USING TK-105/G TOOL KIT, REPLACE CCA AS NECESSARY.

APPENDIX C
COMPONENTS OF END ITEM AND BASIC ISSUE ITEMS LIST

Section I. INTRODUCTION

C-1. SCOPE

This appendix lists components of end item and basic issue items for the OCU-II to help you inventory items required for safe and efficient operation.

C-2. GENERAL

The components of End Item List are divided into the following sections:

a. Section II. Components of End Item. (Not applicable).

b. Section III. Basic Issue Items. These are the minimum essential items required to place the OCU-II in operation, to operate it, and to perform emergency repairs. Although shipped separately packaged, BII must be with the OCU-II during operation and whenever it is transferred between property accounts. The illustrations will assist you with hard-to-identify items. This manual is your authority to request/requisition replacement BII based on TOE/MTOE authorization of the end item.

C-3. EXPLANATION OF COLUMNS

The following provides an explanation of columns found in the tabular listings:

a. Column 1, Illustration Number (Illus Number). This column indicates the number of the illustration in which the item is shown.

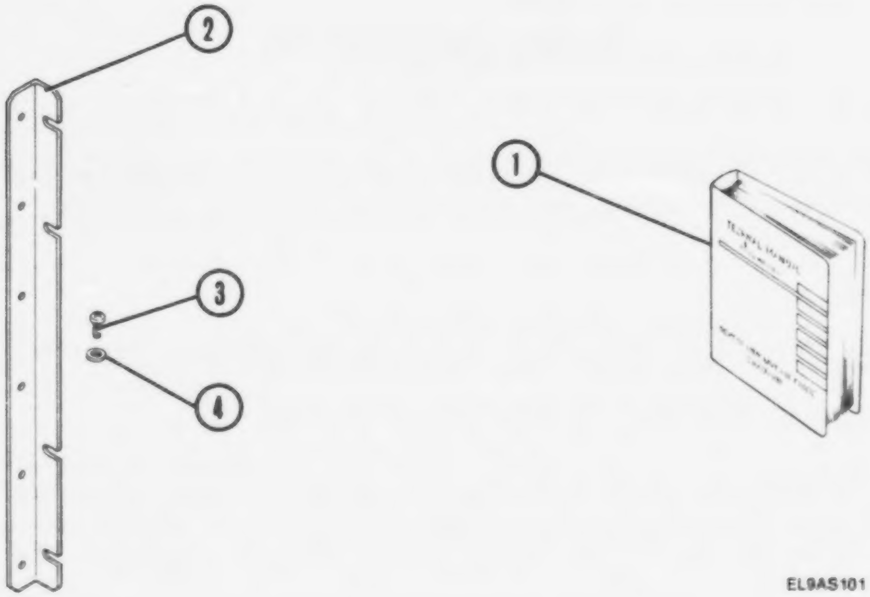
b. Column 2, National Stock Number. Indicates the National Stock Number assigned to the item and will be used for requisitioning purposes.

c. Column 3, Description. Indicates the Federal item name and, if required, a minimum description to identify and locate the item. The last line for each item indicates the FSCM (in parentheses) followed by the part number.

d. Column 4, Unit of Measure (U/M). Indicates the measure used in performing the actual operational/maintenance function. This measure is expressed by a two-character alphabetical abbreviation (e.g., ea, in., pr).

e. Column 5, Quantity Required (Qty Rqd). Indicates the quantity of the item authorized to be used with/on the equipment.

Section III. BASIC ISSUE ITEMS



(1) Illus Number	(2) National Stock Number	(3) Description FSCM and Part Number	(4) U/M	(5) Qty Rqd
1	N/A	Technical Manual TM 11-5805-726-12-2	Ea	1
2	N/A	Mounting Rracket	Ea	2
3	5305-00-059-3659	Mounting Screw	Ea	12
4	5310-00-619-1148	Flat Washer	Ea	12

APPENDIX E
EXPENDABLE SUPPLIES AND MATERIALS LIST

Section I. INTRODUCTION

E-1. SCOPE

This appendix lists expendable supplies and materials you will need to operate and maintain the OCU-II. These items are authorized to you by CTA 50-970, Expendable Items (Except Medical, Class V, Repair Parts, and Heraldic Items).

E-2. EXPLANATION OF COLUMNS

a. Column 1, Item Number. This number is assigned to the entry in the listing and is referenced in the narrative instructions to identify the material (e.g., "use cleaning rag, item 2, Appendix E").

b. Column 2, Level. This column identifies the lowest level of maintenance that requires the listed item.

C .... Operator or Crew
O .... Organizational Maintenance
F .... Direct Support Maintenance
H .... General Support Maintenance

c. Column 3, National Stock Number. This is the National Stock Number assigned to the item; use it to request or requisition the item.

d. Column 4, Description. Indicates the Federal item name and, if required, a description to identify the item. The last line for each item indicates the Federal Supply Code for Manufacturer (FSCM) in parentheses followed by the part number.

e. Column 5, Unit of Measure (U/M). Indicates the measure used in performing the actual maintenance function. This measure is expressed by a two-character alphabetical abbreviation (e.g., ea, in., pr). If the unit of measure differs from the unit of issue, requisition the lowest unit of issue that will satisfy your requirements.

Section II. EXPENDABLE SUPPLIES AND MATERIALS LIST

(1) Item Number	(2) Level	(3) National Stock Number	(4) Description	(5) U/M
1	0	6850-00-105-3084	Cleaning compound, trichlorotrifluoroethane (80244) MIL-C-81302	Pt
2	0	8305-00-267-3015	Cheesecloth (81348) CCCC440	yd

GLOSSARY

Word	Meaning
Bridge	To connect more than one voice channel together.
Channel	Individual signals which are multiplexed to form a group.
Clock	A source of timing signals.
Converter	A device used to change a signal from one form to another.
Data	Any or all facts, numbers, letters, symbols, or information that can be processed or produced by a computer.
Demultiplex	The process by which one data stream is separated into two or more independent signals.
Duplex	Simultaneous two way data flow.
Energize	To activate or turn on.
Faults	Error or indication that something is wrong with the equipment.
Frame	The array of bits between two frame bits.
Group	More than one channel combined into a single signal.
Malfunction	Error or indication that something is wrong with the equipment.
Modem	A modulation/demodulation device that: 1. Takes signals from sources such as multiplexers and generates waveforms suitable to the transmission medium. 2. Takes signals from the transmission medium and converts that to a form suitable for data processing in demultiplexers.
Multiplexer	A device used to combine two or more signals for transmission over a single channel.
Nonreturn to Zero	A signal having two states termed zero and one, and no neutral or reset condition.
Orderwire	A circuit used by maintenance to communicate between facilities.

GLOSSARY—Continued

Word	Meaning
Rectified Ac	Ac current which has been converted into pulsating dc.
Station Clock	A clock signal originating in the system.
Synchronous	Having a regular timing pattern.
Timing	A signal used to identify bits in a digital stream.

ALPHABETICAL INDEX

Page

A

Abbreviations 1-7
Administrative storage 1-6
ANALOG and DIGITAL push switch lamps, control panel, removal and replacement 4-23
Appendixes
  References A-1
  Maintenance allocation chart B-1
  Components of end item and basic issues items list C-1
  Expendable supplies and materials list E-1
Applications of OCU-II 1-18
Arctic climate operation 2-98
Army electronics materiel, destruction to prevent enemy use 1-6
AVOW operation 2-80

B

Basic issue items list C-1
BITE, principles of operation 1-22

C

Capabilities of equipment 1-11
Characteristics of equipment 1-11
Checking unpacked equipment 4-4
Checks, operator 2-73
Circuit card assembly controls and indicators, description 2-10
Circuit card assemblies, logic, removal and replacement 4-25
Circuit card assemblies, power supply, removal and replacement 4-29
Circuit card assembly switches, resetting 2-62
Common tools and equipment 4-2
Components, major, location and description 1-12
Connections, wiring 4-6
Connectors, rear panel, description 2-8
Control panel assembly, removal and replacement 4-35
Control panel lamps, removal and replacement
  ANALOG and DIGITAL push switch 4-23
  SUMMARY STATUS 4-22
Controls and indicators
  CCA, description 2-10
  Front panel, description 2-2
Corrective maintenance, organizational 4-21

best copy available

ALPHABETICAL INDEX—Continued

Page

Covers
- Logic CCA compartment, removal and replacement 4-24
- Power supply CCA compartment, removal and replacement 4-28

D

Data, performance 1-18
Description of equipment 1-10
Description of major components 1-12
Desert climate operation 2-98
Destruction of Army electronics materiel to prevent enemy use 1-6
DVOW operation 2-88

E

Electrical interference guidelines 2-100
Emergency procedures
- Power transients 2-100
- Turnoff 2-100

End item components C-2
Equipment
- Characteristics, capabilities, features and uses...................... 1-11
- Improvement recommendations, reporting 1-5
- Turnoff 2-97
- Turnon 2-71

Errors in manual, reporting i
Expendable supplies and materials list E-1

F

Features of equipment 1-11
Filter assembly, removal and replacement 4-33
First aid .... A
Forms, Army index 1-2
Forms, records and reports, maintenance 1-3
Forms, technical publications and miscellaneous publications referenced A-1
Front panel controls and indicators 2-2
Front panel lamps, removal and replacement 4-21

G

Glossary GLOSSARY-1

ALPHABETICAL INDEX—Continued

Page

H

Hand receipt manual 1-5
High altitude operation 2-99
How to use this manual iii

I

Improvement recommendations, equipment 1-5
Improvements, recommended, manual i
Index, Army publications and forms 1-2
Indicators, front panel 2-2
Indicators, circuit card assembly 2-10
Installation of mounting brackets 4-5

L

Lamps
  Control panel ANALOG and DIGITAL push switch, removal and replacement 4-23
  Control panel SUMMARY STATUS, removal and replacement 4-22
  Front panel, removal and replacement 4-21
Lists
  Abbreviations 1-7
  Components of end item and basic issue items C-1
  Expendable supplies and materials E-1
  Nomenclature cross references 1-6
  Referenced forms, technical publications and miscellaneous publications A-1
Location of major components 1-12
Logic CCA compartment cover assembly removal and replacement 4-24
Logic circuit card assemblies, removal and replacement 4-25

M

Maintenance
  Allocation chart B-1
  Forms, records and reports 1-3
  Operator 3-1
  Operator preventive 2-18
  Organizational, corrective 4-21
  Organizational, preventive 4-7
  Procedures, removal and replacement 4-21
    Filter assembly 4-34

ALPHABETICAL INDEX—Continued

Page

- Lamps
  - Control panel ANALOG and DIGITAL push switch 4-23
  - Control panel SUMMARY STATUS 4-22
  - Front panel 4-21
- Logic circuit card assembly compartment cover 4-24
- Logic circuit card assemblies 4-25
- Power supply circuit card assembly compartment cover 4-28
- Power supply circuit card assemblies 4-29

Manual, scope of 1-2
Manual, use of iii
Modification work orders 4-4
Mounting brackets, installation 4-5

N

Nomenclature cross-reference list 1-7

O

OCU-II, principles of operation 1-20
Operation
- In unusual weather 2-98
- Principles of
  - BITE 1-22
  - OCU-II 1-20
  - Power supply 1-22
- Under unusual conditions 2-98
- Under usual conditions 2-62

Operator checks 2-73
Operator maintenance 3-1
Operator preventive maintenance checks and services 2-18
Organizational corrective maintenance 4-21
Organizational preventive maintenance checks and services (PMCS) 4-6

P

Performance data
- Analog voice orderwire 1-18
- Data orderwire 1-19
- Digital voice orderwire 1-18
- Environmental characteristics 1-19
- Physical characteristics 1-19
- Prime power 1-19

ALPHABETICAL INDEX—Continued

Page

Power supply
- Circuit card assembly compartment cover removal and replacement 4-28
- Circuit card assemblies, removal and replacement 4-29
- Principles of operation 1-20

Power transients, emergency procedures 2-100
Preventive maintenance checks and services (PMCS), operator 2-18
Preventive maintenance checks and services (PMCS), organizational 4-6
PMCS table organizational 4-6
PMCS table, operators 2-18
Principles of operation
- BITE circuits 1-22
- OCU-I 1-20
- Power supply 1-22

Publications, Army, index 1-2
Publications referenced in manual, list A-1
Purpose of equipment 1-10

R

Rear panel connectors 2-8
Recommending improvements
- Manual i
- Equipment 1-5

Removal and replacement procedures
- Filter assembly 4-33
- Lamps
  - Control panel ANALOG and DIGITAL push switch 4-23
  - Control panel SUMMARY STATUS 4-22
  - Front panel 4-21
- Logic circuit card assembly compartment cover 4-24
- Logic circuit card assemblies 4-25
- Power supply circuit card assembly compartment cover 4-28
- Power supply circuit card assemblies 4-29

Repair parts 4-2
Reporting
- Equipment improvement recommendations 1-5
- Errors and recommended improvements, manuals i

Resetting circuit card assembly switches 2-62

ALPHABETICAL INDEX—Continued

Page

S

Salt air, operation in 2-98
Scope of manual 1-2
Service upon receipt 4-2
Special tools, TMDE and support equipment 4-2
SUMMARY STATUS lamps, control panel, removal and replacement 4-22
Switches, circuit card assembly, resetting 2-62

T

Tools and equipment
    Common 4-2
    Special 4-2
Tropical climate, operation in 2-98
Troubleshooting flowchart
    Operator control panel 4-13
    Overall OCU-II 4-16
Troubleshooting procedures 4-12
Turnoff
    Emergency 2-99
    Equipment 2-97
Turnon, equipment 2-71

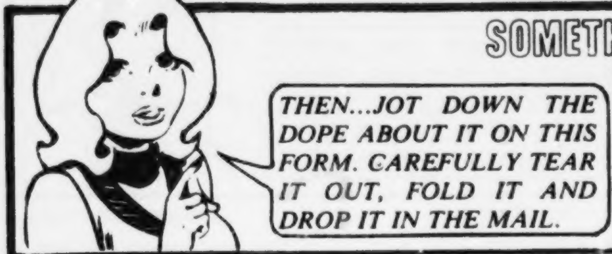
U

Unpacking equipment on receipt 4-3
Unusual conditions, operation under 2-98
Unusual weather, operation in 2-98
Using manual iii
Usual conditions, operation under 2-62

W

Warning page .... B
Weather, unusual, operation in 2-98
Wiring connections 4-6

RECOMMENDED CHANGES TO EQUIPMENT TECHNICAL PUBLICATIONS


THEN...JOT DOWN THE DOPE ABOUT IT ON THIS FORM. CAREFULLY TEAR IT OUT, FOLD IT AND DROP IT IN THE MAIL.

SOMETHING WRONG WITH THIS PUBLICATION?

FROM: (PRINT YOUR UNIT'S COMPLETE ADDRESS)
Commander
Stateside Army Depot
Attn: AMSTA-US
Stateside, NJ 07703

DATE SENT

PUBLICATION NUMBER	PUBLICATION DATE	PUBLICATION TITLE
TM 11-5840-340-12	23 Jan. 1974	Radar Set AN/PRC-76

BE EXACT PIN-POINT WHERE IT IS

PAGE NO.	PARA-GRAPH	FIGURE NO.	TABLE NO.	IN THIS SPACE TELL WHAT IS WRONG AND WHAT SHOULD BE DONE ABOUT IT:
2-25	2-28			Recommend that the installation antenna alignment procedure be changed throughout to specify a 2° IFF antenna lag rather than 1°. REASON: Experience has shown that with only a 1° lag, the antenna servo system is too sensitive to wind gusting in excess of 25 knots, and has a tendency to rapidly accelerate and decelerate as it hunts, causing strain to the drive train. Hunting is minimized by adjusting the lag to 2° without degradation of operation.
3-10	3-3		3-1	Item 5, Function column. Change "2 dB" to "3 dB." REASON: The adjustment procedure the TRANS POWER FAULT indicator calls for a 3 dB (500 watts) adjustment to light the TRANS POWER FAULT indicator.
5-6	5-8			Add new step f.1 to read, "Replace cover plate removed in step e.1, above." REASON: To replace the cover plate.
		F03		Zone C 3. On J1-2, change "+24 VDC" to "+5 VDC." REASON: This is the output line of the 5 VDC power supply. +24 VDC is the input voltage.

SAMPLE

PRINTED NAME GRADE OR TITLE AND TELEPHONE NUMBER
SSG I. M. DeSpiritof 999-1776

SIGN HERE
SSG I. M. DeSpiritof

TEAR ALONG PERFORATED LINE

DA FORM 1 JUL 79 2028-2

PREVIOUS EDITIONS ARE OBSOLETE

P.S.--IF YOUR OUTFIT WANTS TO KNOW ABOUT YOUR RECOMMENDATION MAKE A CARBON COPY OF THIS AND GIVE IT TO YOUR HEADQUARTERS.

REVERSE OF DA FORM 2028-2

TEAR ALONG PERFORATED LINE

FILL IN YOUR
UNIT'S ADDRESS

FOLD BACK

DEPARTMENT OF THE ARMY

POSTAGE AND FEES PAID
DEPARTMENT OF THE ARMY
DOD 314

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE $300

Commander
US Army Communications-Electronics Command
and Fort Monmouth
Attn: AMSEL-ME-MP
Fort Monmouth, New Jersey 07703-5007

RECOMMENDED CHANGES TO EQUIPMENT TECHNICAL PUBLICATIONS

SOMETHING WRONG WITH THIS PUBLICATION?

THEN...JOT DOWN THE DOPE ABOUT IT ON THIS FORM. CAREFULLY TEAR IT OUT, FOLD IT AND DROP IT IN THE MAIL.

FROM: (PRINT YOUR UNIT'S COMPLETE ADDRESS)

DATE SENT

PUBLICATION NUMBER TM 11-5805-726-12-2	PUBLICATION DATE 16 Sept 1985	PUBLICATION TITLE Orderwire Control C-10717/TRC

BE EXACT PIN-POINT WHERE IT IS				IN THIS SPACE TELL WHAT IS WRONG AND WHAT SHOULD BE DONE ABOUT IT:
PAGE NO.	PARA-GRAPH	FIGURE NO.	TABLE NO.	

PRINTED NAME GRADE OR TITLE AND TELEPHONE NUMBER	SIGN HERE

DA FORM 1 JUL 79 2028-2

PREVIOUS EDITIONS ARE OBSOLETE

P.S.--IF YOUR OUTFIT WANTS TO KNOW ABOUT YOUR RECOMMENDATION MAKE A CARBON COPY OF THIS AND GIVE IT TO YOUR HEADQUARTERS.

TEAR ALONG PERFORATED LINE

REVERSE OF DA FORM 2028-2

TEAR ALONG PERFORATED LINE

FILL IN YOUR UNIT'S ADDRESS

FOLD BACK

DEPARTMENT OF THE ARMY

____
____

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE $300

POSTAGE AND FEES PAID
DEPARTMENT OF THE ARMY
DOD 314

U.S.MAIL

Commander
US Army Communications-Electronics Command
and Fort Monmouth
Attn: AMSEL-ME-MP
Fort Monmouth, New Jersey 07703-5007

RECOMMENDED CHANGES TO EQUIPMENT TECHNICAL PUBLICATIONS

THEN...JOT DOWN THE DOPE ABOUT IT ON THIS FORM. CAREFULLY TEAR IT OUT, FOLD IT AND DROP IT IN THE MAIL.

SOMETHING WRONG WITH THIS PUBLICATION?

FROM: (PRINT YOUR UNIT'S COMPLETE ADDRESS)

DATE SENT

PUBLICATION NUMBER TM 11-5805-726-12-2	PUBLICATION DATE 16 Sept 1985	PUBLICATION TITLE Orderwire Control C-10717/TRC

BE EXACT PIN-POINT WHERE IT IS

PAGE NO.	PARA-GRAPH	FIGURE NO	TABLE NO.

IN THIS SPACE TELL WHAT IS WRONG AND WHAT SHOULD BE DONE ABOUT IT:

PRINTED NAME GRADE OR TITLE AND TELEPHONE NUMBER

SIGN HERE

DA FORM 1 JUL 79 2028-2

PREVIOUS EDITIONS ARE OBSOLETE

P.S.--IF YOUR OUTFIT WANTS TO KNOW ABOUT YOUR RECOMMENDATION MAKE A CARBON COPY OF THIS AND GIVE IT TO YOUR HEADQUARTERS.

TEAR ALONG PERFORATED LINE

REVERSE OF DA FORM 2028-2

FILL IN YOUR
UNIT'S ADDRESS

FOLD BACK

DEPARTMENT OF THE ARMY

____

____

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE $300

POSTAGE AND FEES PAID
DEPARTMENT OF THE ARMY
DOD 314

U.S. MAIL

Commander
US Army Communications-Electronics Command
and Fort Monmouth
Attn: AMSEL-ME-MP
Fort Monmouth, New Jersey 07703-5007

TEAR ALONG PERFORATED LINE

RECOMMENDED CHANGES TO EQUIPMENT TECHNICAL PUBLICATIONS

THEN...JOT DOWN THE DOPE ABOUT IT ON THIS FORM. CAREFULLY TEAR IT OUT, FOLD IT AND DROP IT IN THE MAIL.

SOMETHING WRONG WITH THIS PUBLICATION?

FROM: (PRINT YOUR UNIT'S COMPLETE ADDRESS)

DATE SENT

PUBLICATION NUMBER TM 11-5805-726-12-2	PUBLICATION DATE 16 Sept 1985	PUBLICATION TITLE Orderwire Control C-10717/TRC

BE EXACT PIN-POINT WHERE IT IS				IN THIS SPACE TELL WHAT IS WRONG AND WHAT SHOULD BE DONE ABOUT IT:
PAGE NO	PARA-GRAPH	FIGURE NO	TABLE NO	

PRINTED NAME GRADE OR TITLE AND TELEPHONE NUMBER	SIGN HERE

DA FORM 1 JUL 79 2028-2

PREVIOUS EDITIONS ARE OBSOLETE

P.S.--IF YOUR OUTFIT WANTS TO KNOW ABOUT YOUR RECOMMENDATION MAKE A CARBON COPY OF THIS AND GIVE IT TO YOUR HEADQUARTERS.

TEAR ALONG PERFORATED LINE

REVERSE OF DA FORM 2028-2

FILL IN YOUR UNIT'S ADDRESS

FOLD BACK

TEAR ALONG PERFORATED LINE

DEPARTMENT OF THE ARMY

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE $300

POSTAGE AND FEES PAID
DEPARTMENT OF THE ARMY
DOD 314

Commander
US Army Communications-Electronics Command
and Fort Monmouth
Attn: AMSEL-ME-MP
Fort Monmouth, New Jersey 07703-5007

By Order of the Secretaries of the Army, the Navy and the Air Force:

JOHN A WICKHAM, JR.
General, United States Army
Chief of Staff

Official:

MILDRED E. HEDBERG
Brigadier General, United States Army
The Adjutant General

G.B. SCHICK, JR.
Rear Admiral, United States Navy
Commander, Naval Electronic
Systems Command

Official:

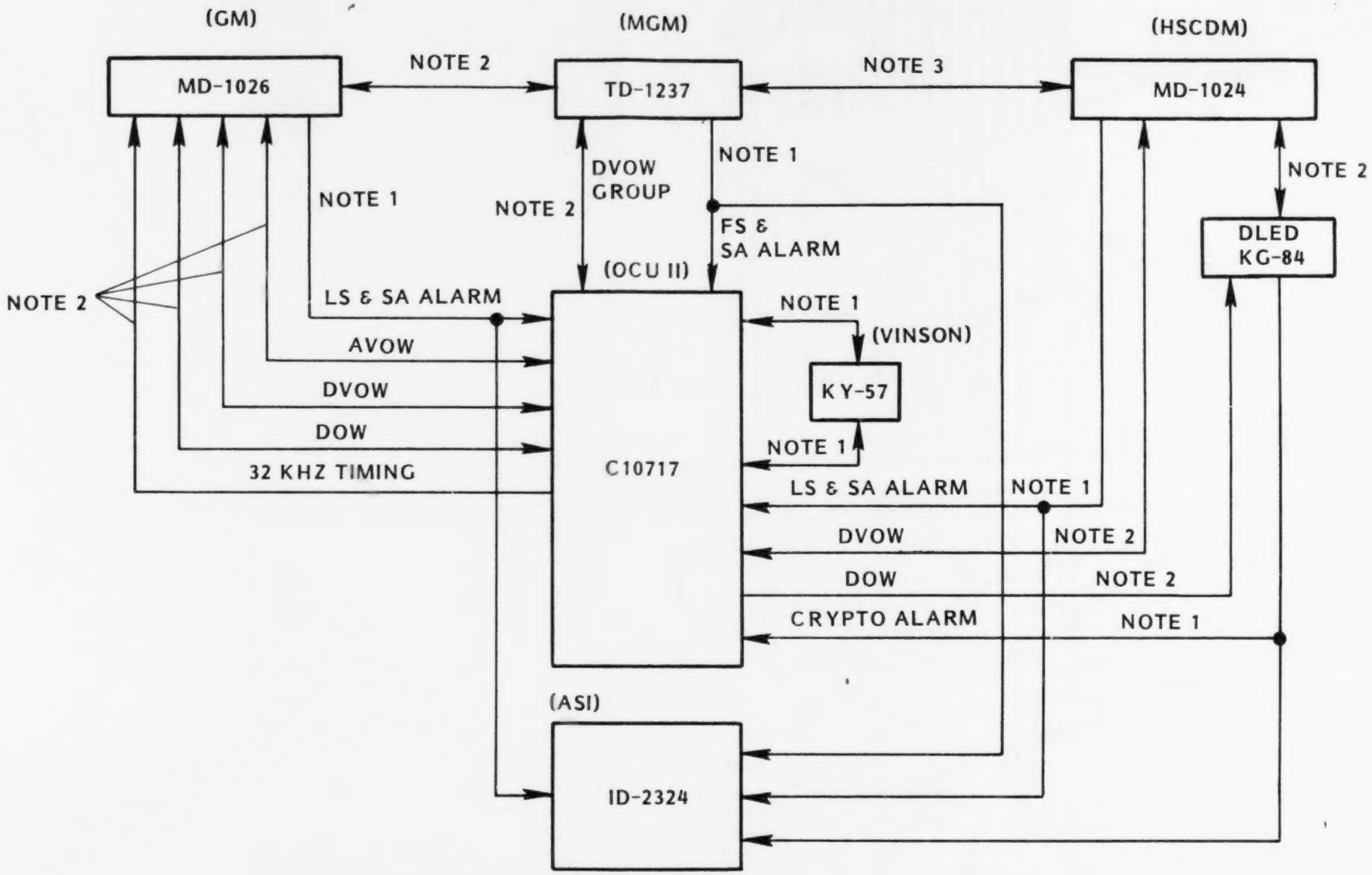
EARL T. O'LOUGHLIN
General, USAF, Commander, Air Force
Logistics Command

CHARLES A. GABRIEL
General, USAF
Chief of Staff

Distribution:

To be distributed in accordance with special list.

☆ U. S. GOVERNMENT PRINTING OFFICE : 1989 O - 242-451 (01678)


(GM)
MD-1026
NOTE 2
(MGM)
TD-1237
NOTE 3
(HSCDM)
MD-1024
NOTE 1
DVOW GROUP
NOTE 2
NOTE 1
NOTE 2
FS & SA ALARM
DLED KG-84
(OCU II)
NOTE 2
LS & SA ALARM
NOTE 1
(VINSON)
AVOW
DVOW
KY-57
DOW
NOTE 1
32 KHZ TIMING
C10717
LS & SA ALARM
NOTE 1
DVOW
NOTE 2
DOW
NOTE 2
CRYPTO ALARM
NOTE 1
(ASI)
ID-2324

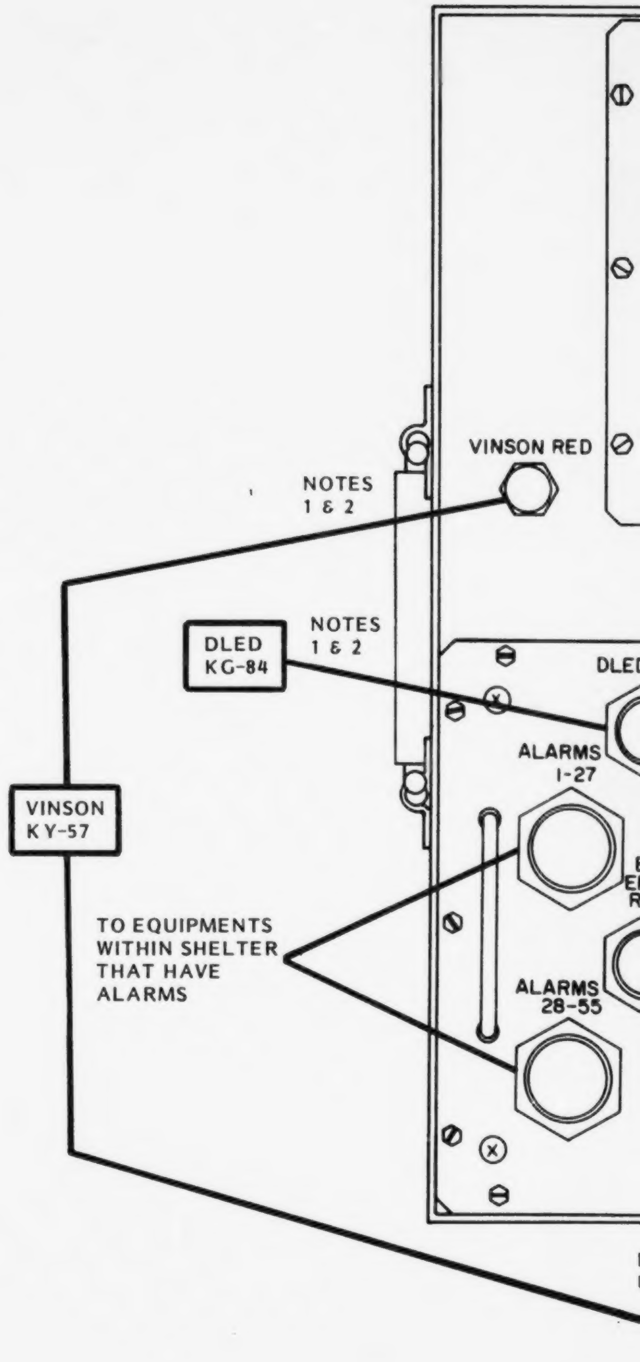
NOTE 1: SHIELDED MULTI-WIRE CABLE 100 FT MAX

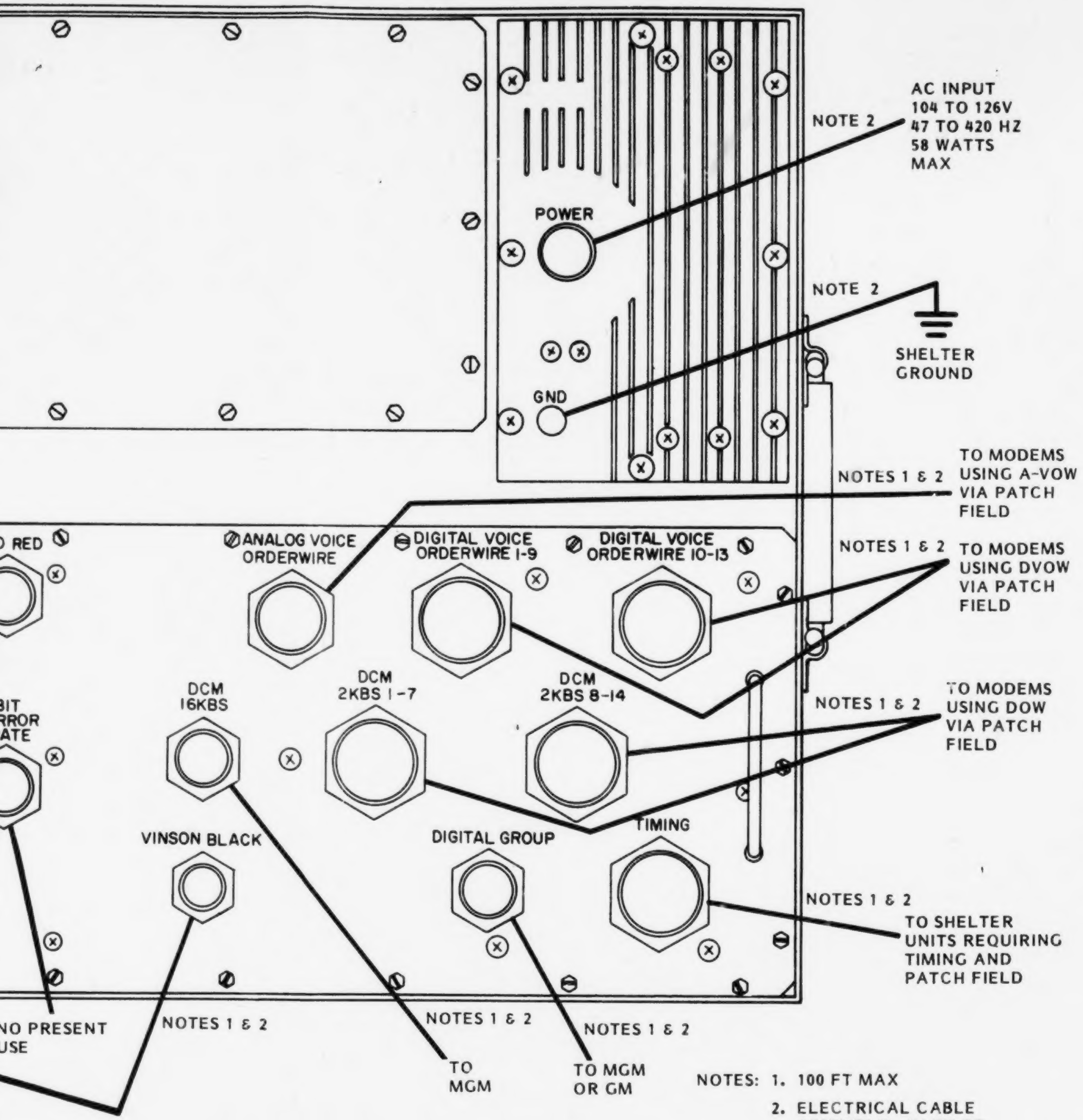
NOTE 2: EQUIPMENT INTERFACE 100 FT MAX TWISTED PAIR CABLE RG-108

NOTE 3: EQUIPMENT INTERFACE 20 FT MAX TWISTED PAIR CABLE RG-108

EL9AS103

Figure FO-1. Orderwire Control C-10717/TRC Sample Application


VINSON RED
NOTES
1 & 2
NOTES
1 & 2
DLED
KG-84
DLED
ALARMS
1-27
VINSON
KY-57
TO EQUIPMENTS
WITHIN SHELTER
THAT HAVE
ALARMS
ALARMS
28-55


AC INPUT
104 TO 126V
47 TO 420 HZ
58 WATTS
MAX
NOTE 2
POWER
NOTE 2
SHELTER
GROUND
GND
NOTES 1 & 2
TO MODEMS
USING A-VOW
VIA PATCH
FIELD
NOTES 1 & 2
TO MODEMS
USING DVOW
VIA PATCH
FIELD
D RED
ANALOG VOICE
ORDERWIRE
DIGITAL VOICE
ORDERWIRE 1-9
DIGITAL VOICE
ORDERWIRE 10-13
NOTES 1 & 2
TO MODEMS
USING DOW
VIA PATCH
FIELD
BIT
RROR
ATE
DCM
16KBS
DCM
2KBS 1-7
DCM
2KBS 8-14
VINSON BLACK
DIGITAL GROUP
TIMING
NOTES 1 & 2
TO SHELTER
UNITS REQUIRING
TIMING AND
PATCH FIELD
NO PRESENT
USE
NOTES 1 & 2
NOTES 1 & 2
NOTES 1 & 2
TO
MGM
TO MGM
OR GM

NOTES: 1. 100 FT MAX
2. ELECTRICAL CABLE ASSEMBLY. PART OF SHELTER INSTALLATION ASSEMBLY

EL9AS105

Figure FO-2. Orderwire Control C-10717/TRC External Connections Diagram

PIN : 058531-000